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C O N S E R V A T I O N

an ELEMENT of the

BAKERSFIELD METROPOLITAN AREA GENERAL PLAN

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KERN COUNTY, CALIFORNIA

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[Bakersfield. City council]
City planning
Conservation
Bakersfield
"

Prepared by the Staff of the Kern County Council of Governments, and the City of Bakersfield.

The preparation of this document was financed in part through a comprehensive planning grant form the U.S. Department of Housing and Urban Development under the provisions of Section 701 of the Housing Act of 1954, as amended, and through the auspices of the Council on Intergovernmental Relations of the State of California.

ABSTRACT

TITLE: Conservation an Element of the Bakersfield Metropolitan Area General Plan

AUTHOR: City of Bakersfield Planning Commission in cooperation with Kern COG

SUBJECT: Plan for conservation development and utilization of natural resources.

DATE: _____, 1973

LOCAL PLANNING AGENCY: City of Bakersfield Planning Commission

SOURCE OF COPIES: City of Bakersfield Planning Commission
Bakersfield, California, 93301

HUD/CIR PROJECT NO.: UPA/1020.07

NO. OF PAGES: 68

ABSTRACT: This report is concerned with the conservation, development, and utilization of natural resources. It includes plans for water, hydraulic forces of water, forests, soils, rivers and other waters, fisheries, wildlife, minerals and other natural resources. The sections dealing with water were developed in coordination with the Kern County Water Agency and all district agencies which have developed, served, controlled or conserved water for any purpose.

The plan identifies general goals and policies, and outlines a course of action for implementing the plan.

This element was adopted by the City Council on _____, 1973.

Resolution No. _____.

PREFACE

We depend on the land for living space, food and fiber, transportation, industry, water supply, wildlife, recreation, and waste disposal. Our management of the land should allow every present and future citizen the opportunity to enjoy a full and fruitful life, not merely a minimal existence. The use of land and other resources must be balanced against the need to maintain the environment on which our population depends.

Conservation is concerned with the management, protection, utilization, and improvement of the land. This element of the general plan is developed to call attention to and assist in decision making which is necessary for long range comprehensive land use planning. Such planning must reflect realistic consideration of diverse factors such as soil, water, climate, population, transportation, taxation, and economics.

The city desires to formulate and implement a policy that will conserve the land by guiding its use and development for the benefit of all. It is for this purpose that the plan has been prepared and adopted.

In the adoption of this conservation element to the General Plan, the governing body is cognizant of inevitable changes in conditions and circumstances which will occur in the future, as they have occurred in the past. Therefore, the conservation plan is conceived of as a plan which is not necessarily permanent, but one subject to periodic amendment, to change or set new or different goals as time goes by and as new or different conditions and circumstances occur, or as conceptions of proper goals may change.

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SUMMARY

This plan is primarily concerned with conservation of natural resources and with environmental issues which have an effect on such resources. A primary purpose of the plan is to provide guidelines for making decisions regarding natural resource conservation programs and needs. One of the first steps in preparing the plan is the identification of the community needs. The presence of such conservation needs has been declared by the state legislators who mandated that a conservation element be included in the general plan of each county and city in California.

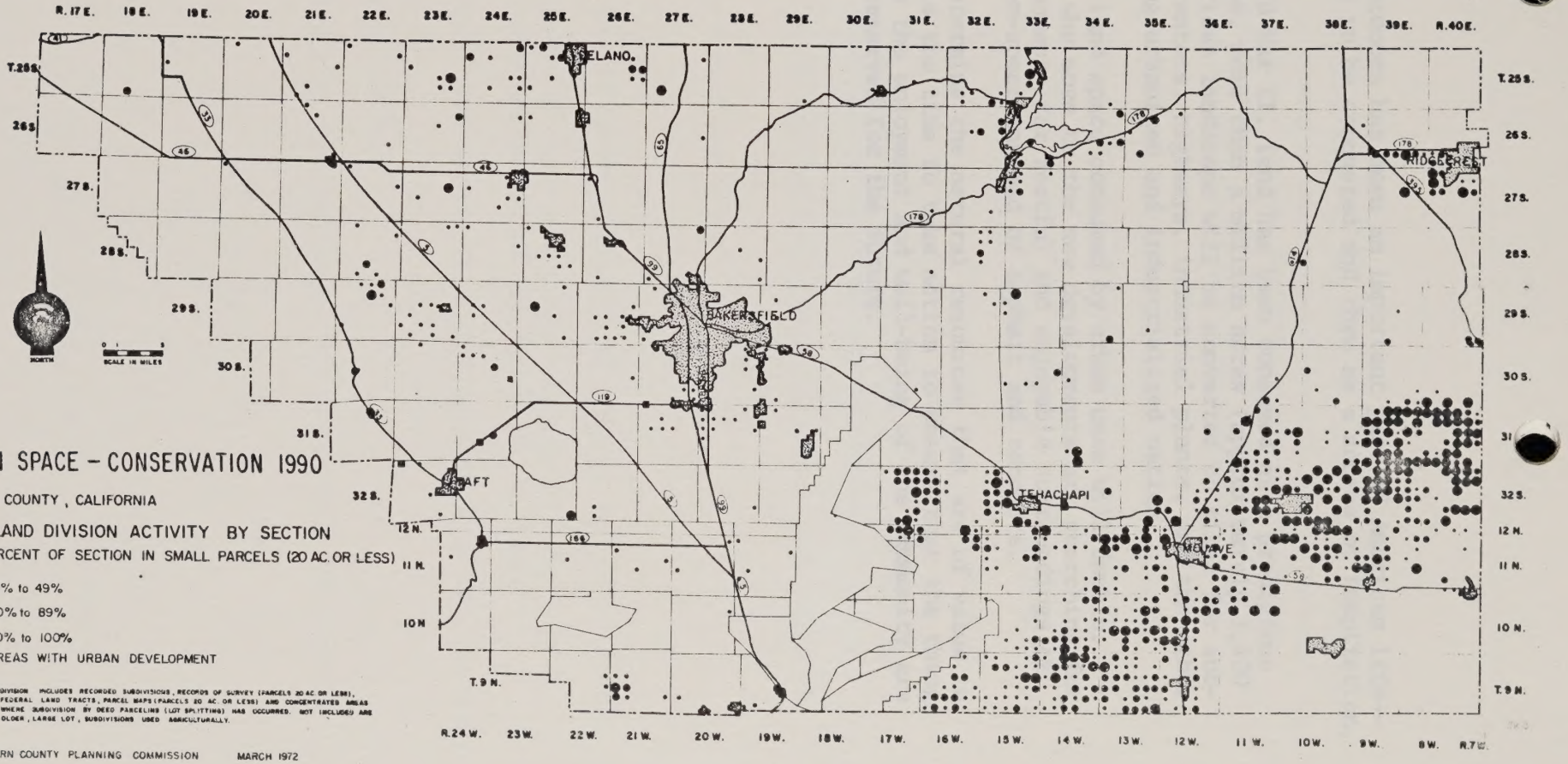
A projection of conservation needs of the nation as a whole, in line with estimated population growth, indicates that a massive future effort will be needed if the areas to be conserved are to match the future requirements.

A review of the cities' present level of conservation efforts was made to determine what measures are being taken and to determine where present efforts are deficient. This review laid the foundation for developing conservation objectives, policies, and goals for the program of development, conservation, and utilization of natural resources. The scope of the conservation element includes programs for water, hydraulic forces of water, forests, soil, rivers and other waters, fisheries, wildlife, minerals and other natural resources. This plan examines these factors. It considers the planning steps and establishes priorities for the development of the plan. It is intended to determine and influence the cities' conservation trend, as well as to anticipate changes in the direction of concepts in conservation. It is designed to meet the present and future needs of the city residents at a level that is acceptable to the community.

The County of Kern has adopted an Open Space and Conservation Element as part of their General Plan. It includes all of the unincorporated area of the county. Many factors considered in this regional plan are not applicable to a more restrictive plan such as the cities'. However, there are features in the county plan, such as water, soil and hydraulic forces of water, which are not limited to political bourndaries and should be planned jointly by the city and county.

The city residents have a vested interest in the county area which affects the quality of their lives. Besides the general interest, a major sphere of interest exists in the area surrounding the city. For this reason, the city herein adopted goals and policy statements regarding such natural resources as forests and fisheries, which are not found within the city. Cooperation between the city, county, and state planners is encouraged so the interests of all citizens can be protected.

The maps showing natural resources that are regional in character were prepared by the County Planning Department. Their assistance and cooperation is greatly appreciated.



OPEN SPACE – CONSERVATION 1990

KERN COUNTY, CALIFORNIA

LAND DIVISION ACTIVITY BY SECTION

PERCENT OF SECTION IN SMALL PARCELS (20 AC. OR LESS)

- 10% to 49%
- 50% to 89%
- 90% to 100%
- AREAS WITH URBAN DEVELOPMENT

* DIVISION INCLUDES RECORDED SUBDIVISIONS, RECORDS OF SURVEY (PARCELS 20 AC. OR LESS), FEDERAL LAND TRACTS, PARCEL MAPS (PARCELS 20 AC. OR LESS) AND CONCENTRATED AREAS WHERE SUBDIVISION BY DEED PARCELING (LOT SPLITTING) HAS OCCURRED. NOT INCLUDED ARE OLDER, LARGE LOT, SUBDIVISIONS USED AGRICULTURALLY.

KERN COUNTY PLANNING COMMISSION MARCH 1972



CONSERVATION
the Challenge

Traditionally, the outdoors has been an important part of American life--first as a wilderness to be conquered and then as a source of inspiration, and recreation.

Since the end of World War II, land has been consumed at a prodigious rate. This year alone, more than a million acres (approximately 1,600 square miles) of American landscape will be converted to sites for subdivisions, shopping centers, highways, industrial plants, and the other needs of an increasing urbanized and industrialized nation.

In the next 40 years land space consumed by urban uses will double. Most of the families who move to the new developments are searching for a more livable environment--for restful and enjoyable surroundings of trees, grass, and open-space instead of asphalt and concrete.

Now is the time to determine the natural resources that are of value in the community. Now is the time to take action to ensure that the things that are important to the enjoyment and well-being of the community are not exploited, but preserved for the future.

CONSERVATION DEFINED

This state has demonstrated an unparalleled capacity to build and develop the economic resources needed to provide its citizens with a high standard of living. However, it is becoming increasingly obvious that a greater organized effort must be directed toward protecting and enhancing the natural resources and environment. To accomplish this end, this conservation element is included in the various elements of the general plan adopted by the city.

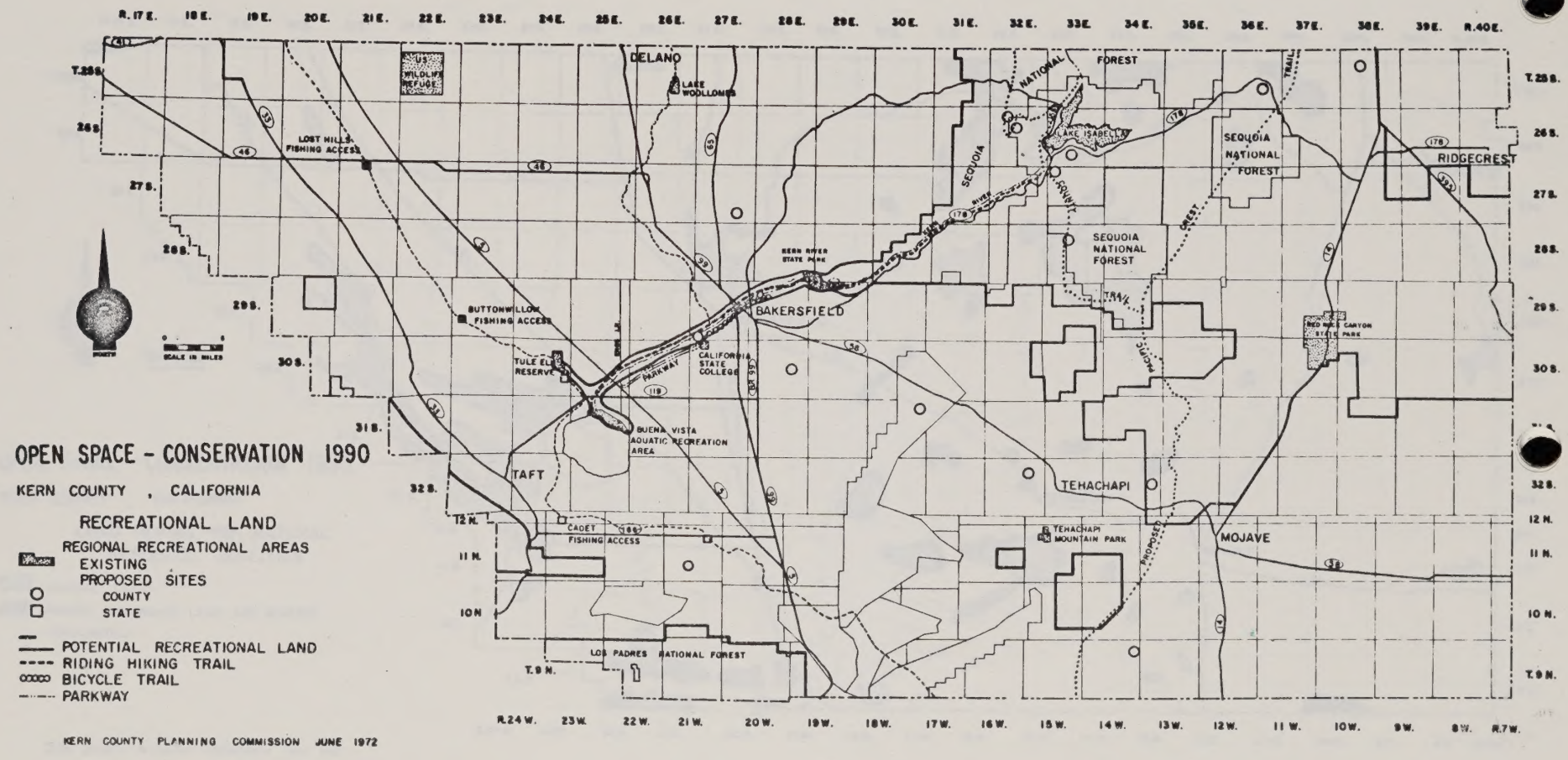
CONSERVATION, as used in this element of the general plan, is defined as:

> The official care, development, preservation, and utilization of such resources as water, soils, rivers and other waters, fisheries, wildlife, minerals, and other natural resources.

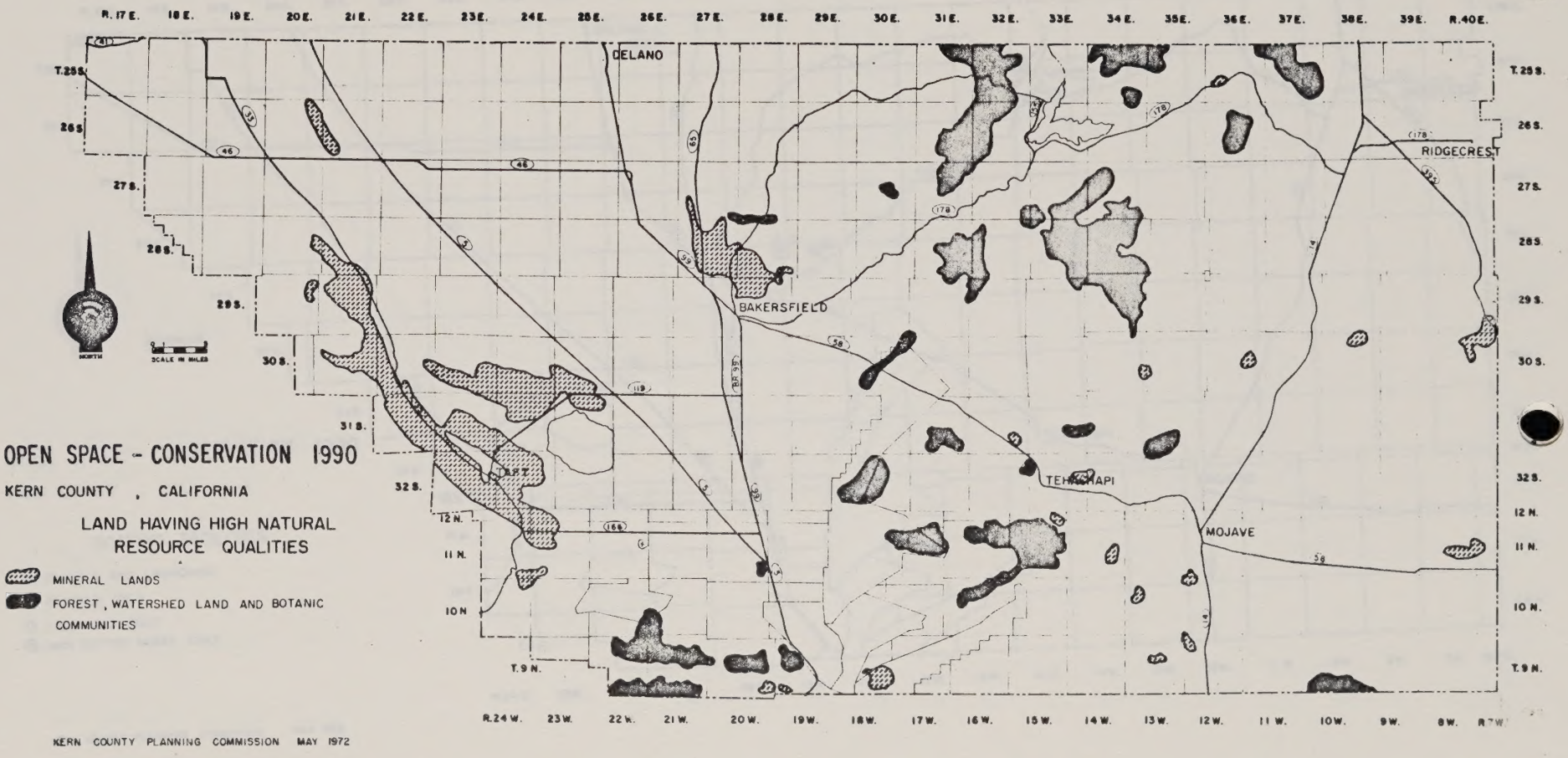
That portion of the conservation element directed toward waters was developed in cooperation with the countywide water agency and with all district and city agencies which have developed, served, controlled, or conserved water for any purposes for which the plan is prepared.

The State Law provides that conservation elements may cover such additional features as:

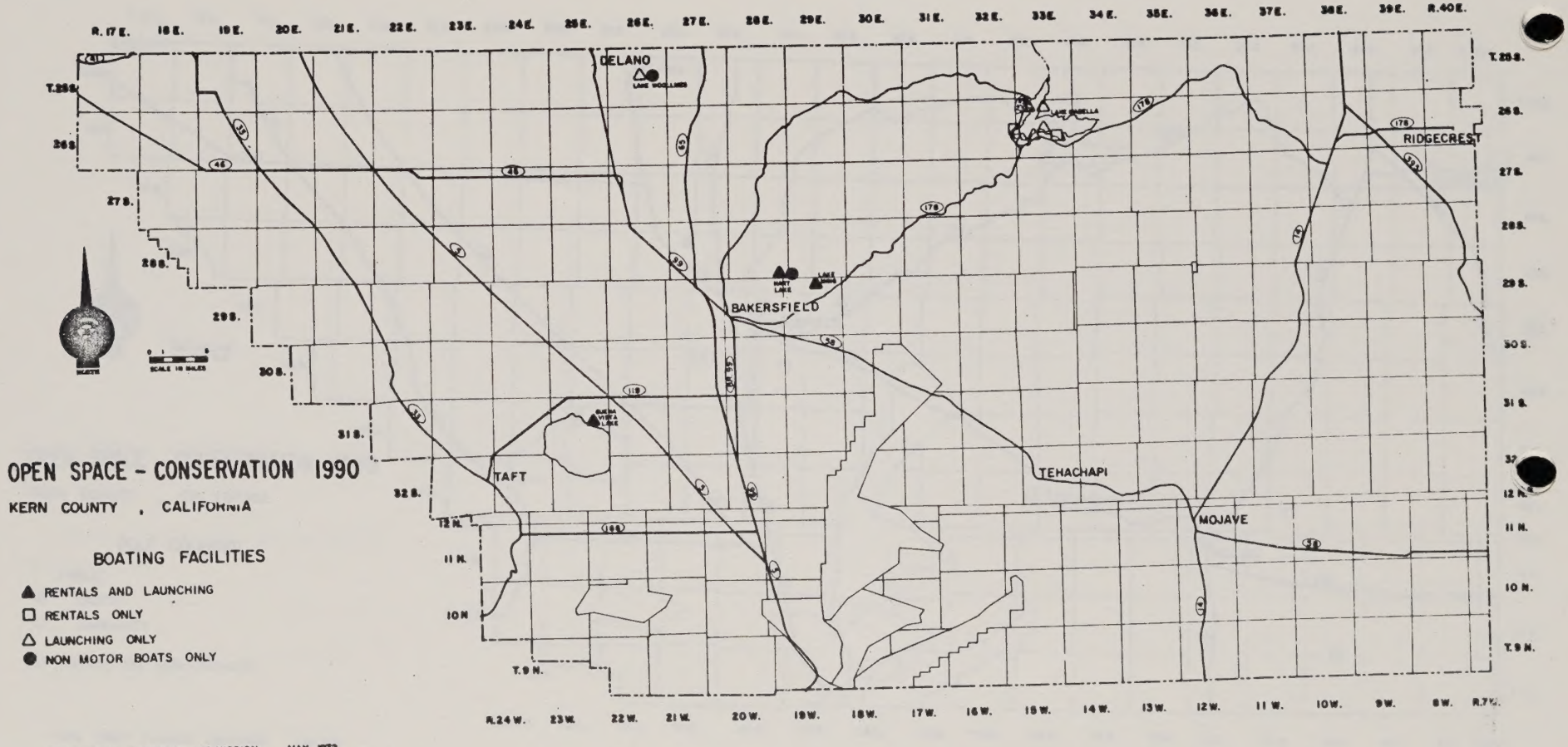
1. The reclamation of land and water.
2. Flood control.
3. Prevention and control of the pollution of streams and other waters.
4. Regulation of the use of land in stream channels and other areas required for the accomplishment of the conservation plan.
5. Prevention, control, and correction of the erosion of soils, beaches, and shores.
6. Protection of water sheds.
7. The location, quantity, and quality of the rock, sand, and gravel resources.

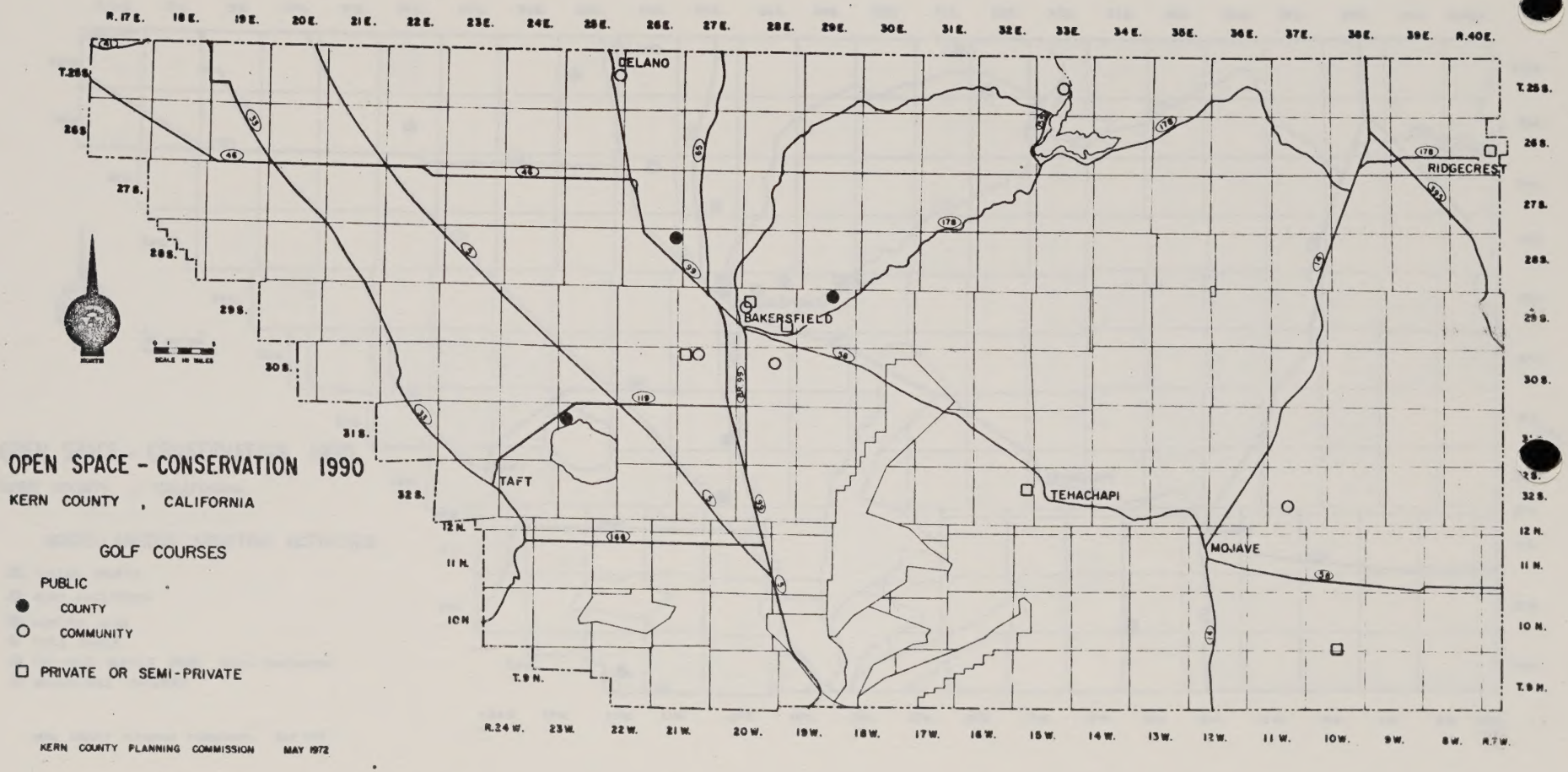

OPEN SPACE - CONSERVATION 1990
KERN COUNTY , CALIFORNIA
RECREATIONAL LAND
REGIONAL RECREATIONAL AREAS
EXISTING
PROPOSED SITES
COUNTY
STATE
POTENTIAL RECREATIONAL LAND
RIDING HIKING TRAIL
BICYCLE TRAIL
PARKWAY
KERN COUNTY PLANNING COMMISSION JUNE 1972
DELANO
LAKE WOOLLOMES
US WILDLIFE REFUGE
LOST HILLS FISHING ACCESS
BUTTONWILLOW FISHING ACCESS
TULE ELK RESERVE
BAKERSFIELD
KERN RIVER STATE PARK
CALIFORNIA STATE COLLEGE
BUENA VISTA AQUATIC RECREATION AREA
TAFT
CADET FISHING ACCESS
LOS PADRES NATIONAL FOREST
TEHACHAPI
TEHACHAPI MOUNTAIN PARK
MOJAVE
LAKE ISABELLA
SEQUOIA NATIONAL FOREST
RIDGECREST
RED ROCK CANYON STATE PARK
SEQUOIA
KERN
CREST
TRAIL
PROPOSED
SCALE IN MILES



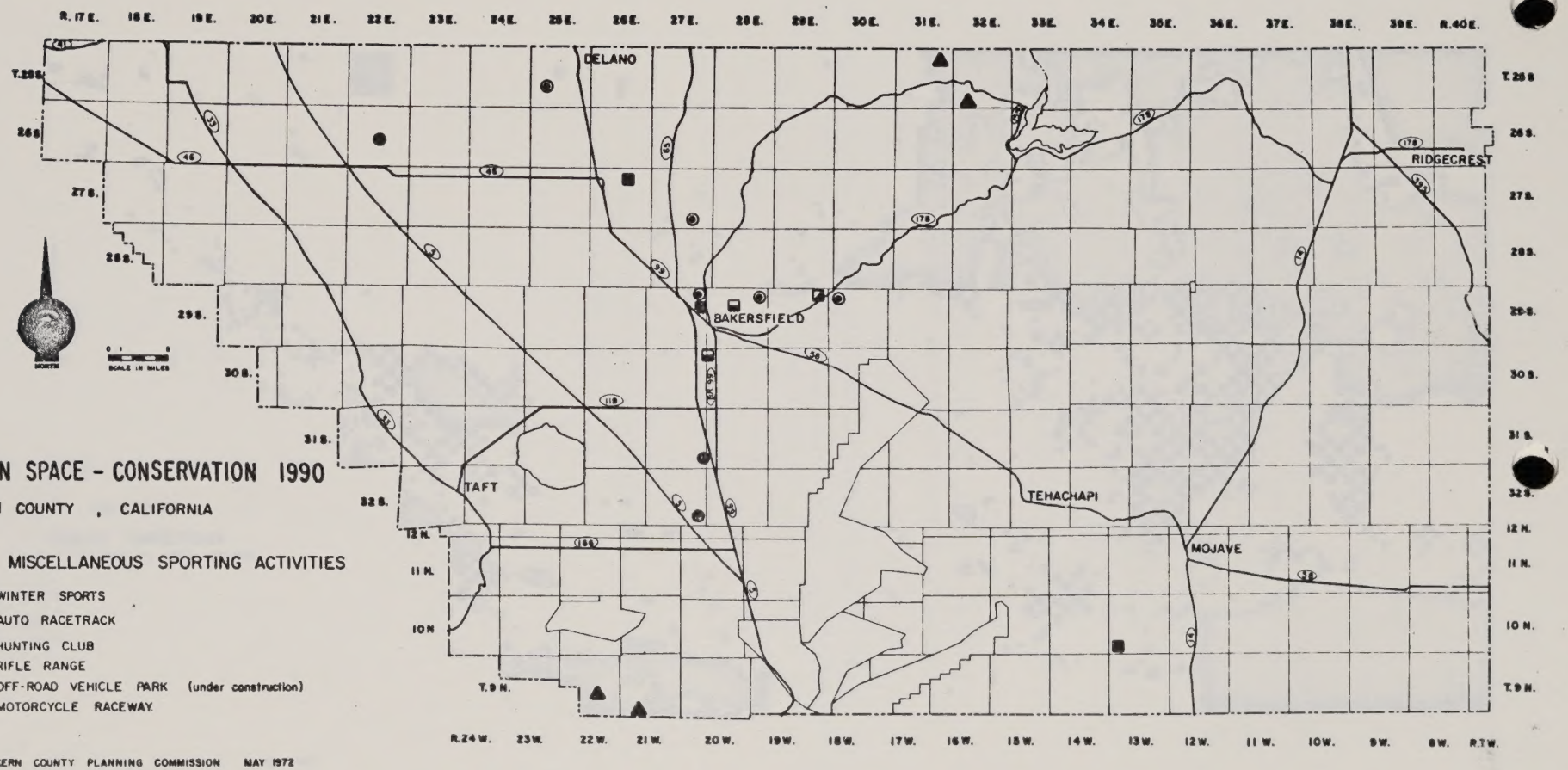

R.17E. 18E. 19E. 20E. 21E. 22E. 23E. 24E. 25E. 26E. 27E. 28E. 29E. 30E. 31E. 32E. 33E. 34E. 35E. 36E. 37E. 38E. 39E. R.40E.
T.25S.
26S.
27S.
28S.
29S.
30S.
31S.
32S.
12N.
11N.
10N
T.9N.
R.24W. 23W. 22W. 21W. 20W. 19W. 18W. 17W. 16W. 15W. 14W. 13W. 12W. 11W. 10W. 9W. 8W. R.7W.
DELANO
BAKERSFIELD
RIDGECREST
TEHACHAPI
MOJAVE
NORTH
SCALE IN MILES
OPEN SPACE - CONSERVATION 1990
KERN COUNTY , CALIFORNIA
LAND HAVING HIGH NATURAL RESOURCE QUALITIES
MINERAL LANDS
FOREST , WATERSHED LAND AND BOTANIC COMMUNITIES
KERN COUNTY PLANNING COMMISSION MAY 1972




R. 17 E.
18 E.
19 E.
20 E.
21 E.
22 E.
23 E.
24 E.
25 E.
26 E.
27 E.
28 E.
29 E.
30 E.
31 E.
32 E.
33 E.
34 E.
35 E.
36 E.
37 E.
38 E.
39 E.
R. 40 E.
T. 25 S.
26 S.
27 S.
28 S.
29 S.
30 S.
31 S.
32 S.
12 N.
11 N.
10 N.
T. 9 N.
R. 24 W.
23 W.
22 W.
21 W.
20 W.
19 W.
18 W.
17 W.
16 W.
15 W.
14 W.
13 W.
12 W.
11 W.
10 W.
9 W.
8 W.
R. 7 W.
DELANO
BAKERSFIELD
TAFT
TEHACHAPI
MOJAVE
RIDGECREST
LAKE WOOLLOMES
LAKE ISABELLA
LAKE ILOMA
BUENA VISTA LAKE
SCALE IN MILES
OPEN SPACE - CONSERVATION 1990
KERN COUNTY , CALIFORNIA
BOATING FACILITIES
RENTALS AND LAUNCHING
RENTALS ONLY
LAUNCHING ONLY
NON MOTOR BOATS ONLY
KERN COUNTY PLANNING COMMISSION MAY 1972


R.17E. 18E. 19E. 20E. 21E. 22E. 23E. 24E. 25E. 26E. 27E. 28E. 29E. 30E. 31E. 32E. 33E. 34E. 35E. 36E. 37E. 38E. 39E. R.40E.
T.25S.
26S.
27S.
28S.
29S.
30S.
31S.
32S.
12N.
11N.
10N.
T.9N.
R.24W. 23W. 22W. 21W. 20W. 19W. 18W. 17W. 16W. 15W. 14W. 13W. 12W. 11W. 10W. 9W. 8W. R.7W.
DELANO
BAKERSFIELD
TAFT
TEHACHAPI
MOJAVE
RIDGECREST
OPEN SPACE - CONSERVATION 1990
KERN COUNTY , CALIFORNIA
GOLF COURSES
PUBLIC
COUNTY
COMMUNITY
PRIVATE OR SEMI-PRIVATE
KERN COUNTY PLANNING COMMISSION MAY 1972





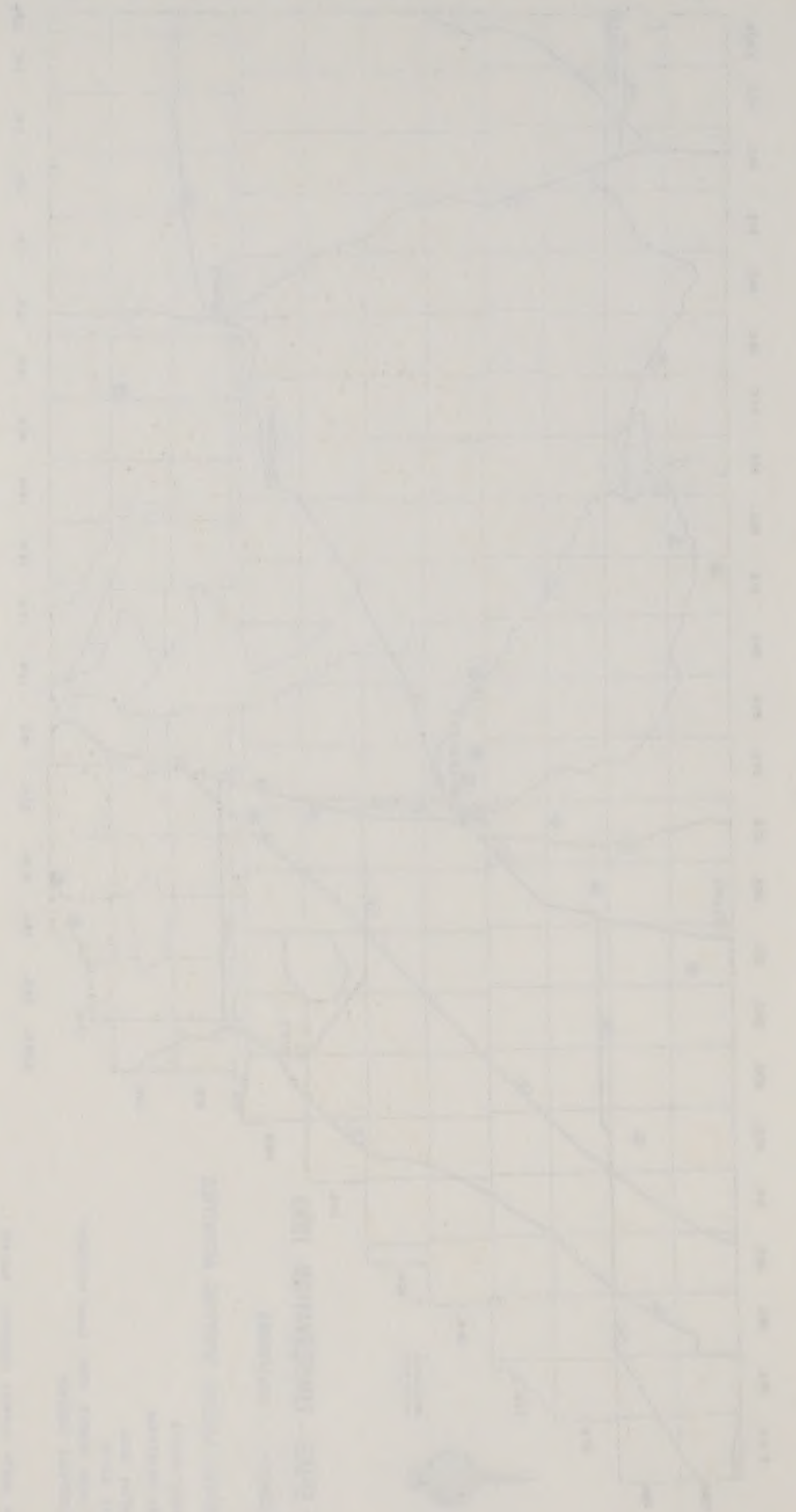
OPEN SPACE - CONSERVATION 1990

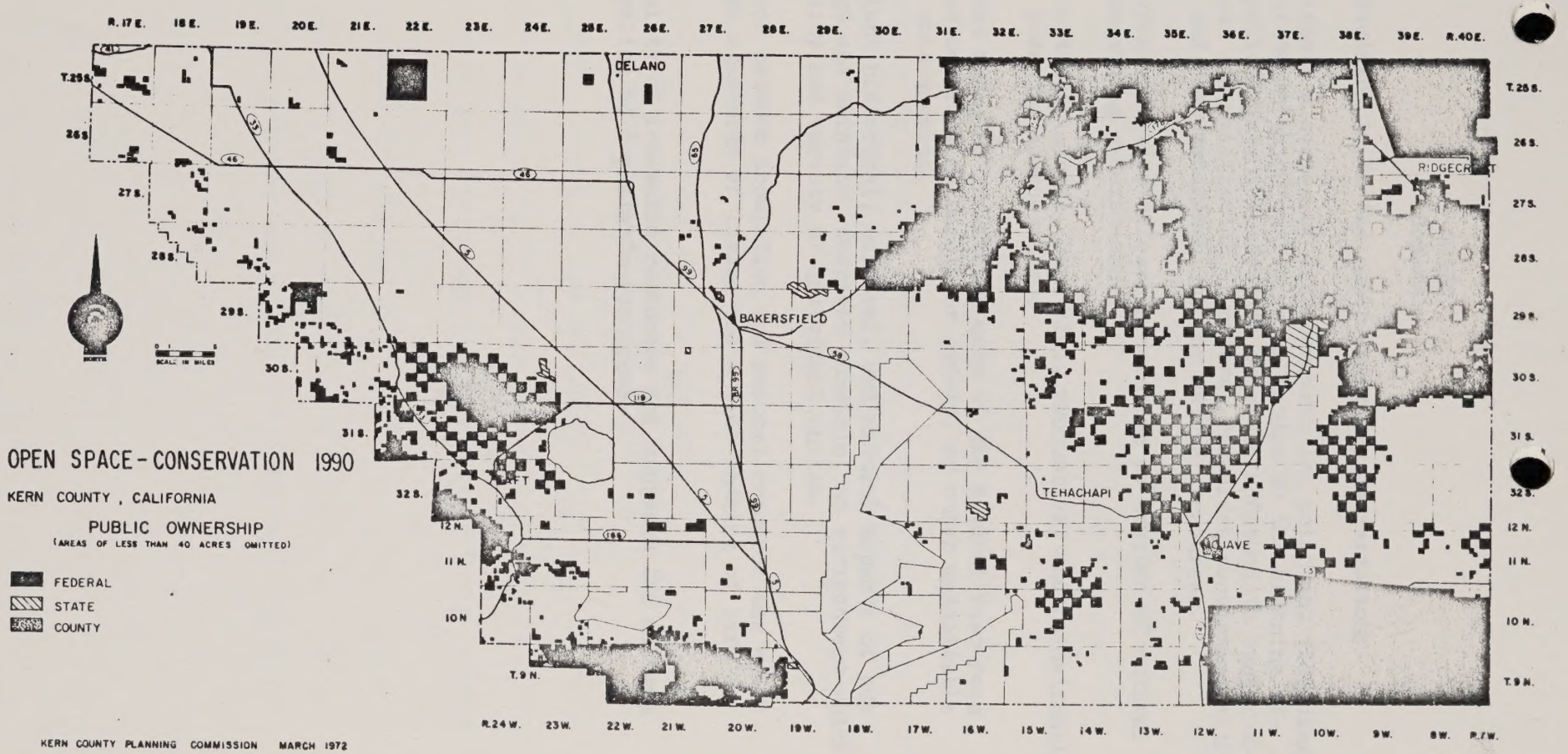
KERN COUNTY , CALIFORNIA

MISCELLANEOUS SPORTING ACTIVITIES

- ▲ WINTER SPORTS
- ■ AUTO RACETRACK
- ● HUNTING CLUB
- ◐ RIFLE RANGE
- ◪ OFF-ROAD VEHICLE PARK (under construction)
- ◘ MOTORCYCLE RACEWAY

KERN COUNTY PLANNING COMMISSION MAY 1972




R.17E. 18E. 19E. 20E. 21E. 22E. 23E. 24E. 25E. 26E. 27E. 28E. 29E. 30E. 31E. 32E. 33E. 34E. 35E. 36E. 37E. 38E. 39E. R.40E.
T.25S.
26S.
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12N.
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T.9N.
R.24W. 23W. 22W. 21W. 20W. 19W. 18W. 17W. 16W. 15W. 14W. 13W. 12W. 11W. 10W. 9W. 8W. R.7W.
DELANO
BAKERSFIELD
TEHACHAPI
MOJAVE
RIDGECR
SCALE IN MILES
OPEN SPACE - CONSERVATION 1990
KERN COUNTY, CALIFORNIA
PUBLIC OWNERSHIP
(AREAS OF LESS THAN 40 ACRES OMITTED)
FEDERAL
STATE
COUNTY
KERN COUNTY PLANNING COMMISSION MARCH 1972



GOALS
General

The following are declared to be the goals regarding conservation:

1. Develop and maintain a series of land conservation policies, including standards and criteria which can serve as guides to the planning efforts. These policies are developed in order to accommodate conservation, development and utilization of natural resources consistent with the production and wise management of our natural resources.

2. Fulfill the responsibilities of each generation as trustee of natural resources for suceeding generations.

3. Assure for all citizens a safe, healthful, productive, and esthetically and culturally pleasing surroundings.

4. Attain the widest range of beneficial uses of the natural resources without degradation, risk to health or safety, or other undesirable and unintended consequences.

5. Preserve important historical, cultural, and natural aspects of our natural heritage and maintain, wherever possible, an environment which supports diversity and variety of individual choice.

6. Achieve a balance between population and natural resource use which will permit high standards of living and a wide sharing of life's amenities.

7. Enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

THE PROGRAM

STATEMENTS OF DEVELOPMENT POLICIES
Objectives & Principles

While the resources must be shepherded more effectually in the future if we are to improve the quality of life for all citizens, care must be taken to insure that a balanced perspective is maintained. Traditional freedoms must be preserved and not subjected to unnecessary restrictions. A completely controlled economy, a totally planned and regimented environment, is as much of an anathema to the citizen as a completely unregulated and chaotic society.

The purpose of these plans is to achieve a proper balance within the constitutional structure of government in a free society.

By developing appropriate conservation standards, local government will have a definite framework within which they may develop more specific goals and policies to meet their concern and responsibility.

Objectives

This plan was developed in order:

--To provide the planning commission and the city council with guidance to carry out the goals and policies "to protect, conserve, develop, and utilize the natural resources and wildlife of the state".

--To preserve the rights of the people to the enjoyment of the environment.

--To assure access by the public to open-space and recreational facilities.

--To maintain areas of natural beauty and make them available for enjoyment of the people.

--To propagate and protect fish and game.

--To maintain and improve wildlife habitat.

--To acquire and improve land and water areas for purposes of recreation.

Principles

This report was prepared in consideration of the following basic principles:

1. Decisions on environmental problems should be made:

   a. At the level of government which is closest and most responsive to the people who are most affected by the use or development of the particular natural resource.

   b. State Government should intercede in local matters only where necessary to mediate jurisdictional disputes or where conservational problems and/or resources are of such a magnitude or unique quality that their significance extends beyond local jurisdictional boundaries.

2. State Government should assist local government in carrying out its responsibilities by providing technical and financial assistance to local government in protecting and conserving natural resources and the assessment of the impact of technology on the environment.

3. Local government should insure public participation in government's decision-making process by holding public hearings and providing an equal opportunity for all opinions to be presented and thoroughly considered.

CONSERVATION RESOURCES

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1. WATER

There are two sources of water in Kern County: ground water occurring in subsurface aquifers and extracted by pumping wells, represents the major source of domestic water; and surface water from streams and imported water, used mostly for agriculture, represents a secondary source.

Ground water is an important resource and should be considered in a management context like other resources. Although ground water reservoirs are extensive, they are neither infinite nor impervious to contamination.

The surface water used so extensively in the region is largely imported from remote sources. Because the Mediterranian climate, with winter rains and dry summer weather, intermittent flow in most streams resulted.

It is possible to evaluate the natural recharge rate, the discharge rate of underground reservoirs and to determine the potential for artificial recharge. Imported water or stream water which is allowed to percolate or be pumped into an underground aquifer is used in the artificial recharging process.

The chemical and biological properties of the water can be determined, as well as the susceptibility of the reservoir, to contamination from such things as effluent from sewer systems, pollution from discharge of industrial waste, or invasion of the reservoir by salt water. Having these capabilities, it is possible to design and establish a program of ground water reservoir management that will provide optimal use of the resource.

Goal

1. It is the goal of the city to conduct an adequate conservation program to insure a supply and quality of water to meet the present and future needs.

2. To obtain maximum benefit from limited imported water resources.

3. To use ground water for the highest benefit possible.

Policy

1. Promulgate specific policies regarding water conservation and quality which includes:

   a. Prevents discharge of waste water in a manner that permits it to contaminate fresh water.

   b. Dispose of solid waste in a manner that prevents the contamination of fresh water.

   c. To recognize and implement the State Water Resource Board's policy as established by the Central Valley office of the Water Quality Control Board.

2. Analyze and evaluate all proposals for waste water systems in terms of the cause and effect relationship of those proposals on the natural resource elements to the total environment.

3. Base priority for utilization of water on all factors associated with both the source and the contemplated uses of the water.

Implementation

1. California has in the Porter-Cologne Water Quality Control Act the water quality standards which will be adhered to and enforced in order to provide an effective water pollution control measure.

2. The water supply of the city shall be managed in a manner that provides adequate quantities and quality of water.

Inventory

Within the corporated boundaries of Bakersfield, domestic water is supplied to its users by three private companies. Of these three California Water Service is by far the largest, serving practically all of the City east of Stine Road while the Garden Water Company serves a very small portion of the City, consisting of a strip northerly of Pacheco Road between South H- Street and Union Avenue, and a small area southerly of Pacheco Road westerly of Union Avenue. The third water company is the Kern Island Water Company, which serves that portion of the City west of Stine Road.

The source of water is from wells operated by each of the companies in their area of jurisdiction.

California Water Service Company is composed of many small distribution system connected together. Each unit has wells to supply the water to meet the demand of the unit. These units have been connected together to allow water from adjacent areas to provide supplemental flow to meet peak demands and emergency conditions that occur from time to time in any one unit. The entire lower pressure zone is constructed in this fashion. Distribution system pressure is maintained by hydropneumatic tanks on most of the wells.

The upper zones have been constructed in the usual manner of a well field in a high producing aquifer that pumps that water to ground storage tanks above the distribution system. There are ten other zones in the California Water Service Company system which serves the downtown and the northeasterly portion of the City. The well field is located in the southwest corner of their service area and the water is conveyed across town in a 36 to 24 inch transmission pipeline to the storage tanks in the upper zones.

The Kern Island Water Company also use wells to supply water to their customers. Hydropneumatic tanks are used in connection with the wells to provide for flows without operating a pump. The entire service area has approximately the same elevation so it does not require different pressure zones. Storage reservoirs have not been used in the system since an adequate quantity of water can be taken from the water table basins as demand requires.

The Garden Water Corporation has two service areas, one of which is located entirely in the unincorporated area. The other service area includes a small southerly edge of the City. As with the other two companies, the arrangement consists of wells pumping into the distribution system.

Water facilities including water lines, storage facilities, combined storage and pumping facilities, and water wells are shown on "Map A and B"

of the Public Services and Facilities Element of the Bakersfield Metropolitan Area General Plan.

Deficiencies

Of concern is the water depletion rate in ground aquifers. Agriculture in the area is a prolific user of ground water. The surface water available is but a small portion of the total used. The annual rate of overdraft in Bakersfield and its immediate environ is estimated to be 65,000 acre feet. Unless the trend is reversed, the cost of pumping will rise and the quality of the water will worsen.

As additional imported water becomes available to supplement the usage of ground water for agriculture, the ground water basin's rate of decline will be slowed.

In addition, a large portion of imported water contracted for urban use is proposed to be discharged into suitable areas for the recharging of under ground water basin.

Projected Development Plan

Kern County Water Agency's construction plan of the Cross Valley Canal is not firm. Facilities proposed for Improvement District #4, in which the City of Bakersfield is a part, includes ground water recharge facilities, a water treatment plant, and two treated water conveyance facilities.

As proposed, several turnouts will be built along the easterly portion of the Cross Valley Canal to allow water to be diverted to the spreading areas along the north side of the Kern River flood channel between Calloway Weir and at a point easterly of Coffee Road.

A measuring device will be installed in each turnout to aid in maintaining accurate water accounts and in the operation of the recharge basins. The recharge capacity is estimated to be approximately 65,000 acre feet per year under exising conditions.

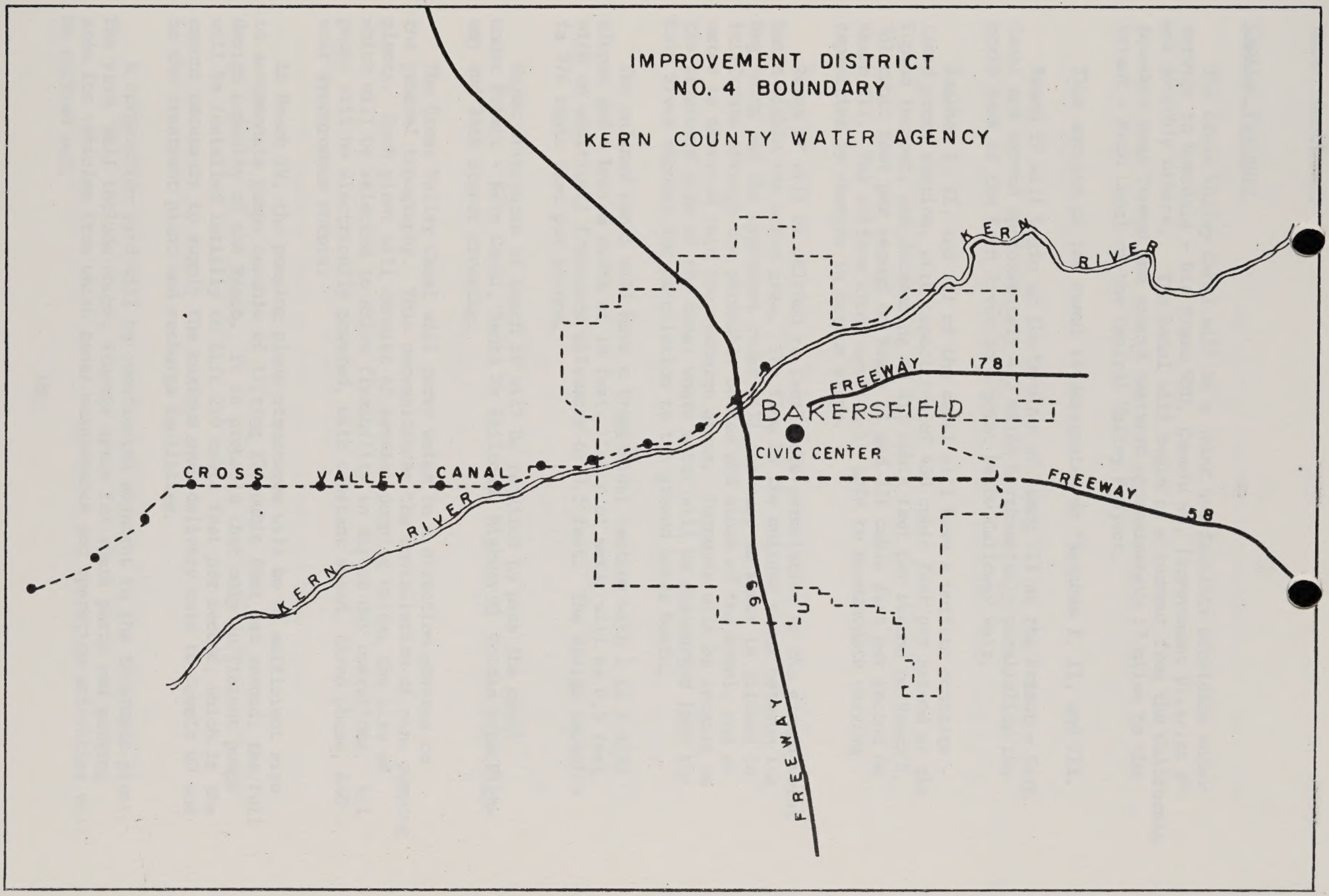
A treatment plant and related facilities is proposed to be located between Golden State Avenue and the Southern Pacific Railroad just northerly of Kern River for treating a portion of the urban water entitlement for direct delivery into distribution systems serving parts of Bakersfield, East Niles Community Service Distric, and North of the River M. W. D.

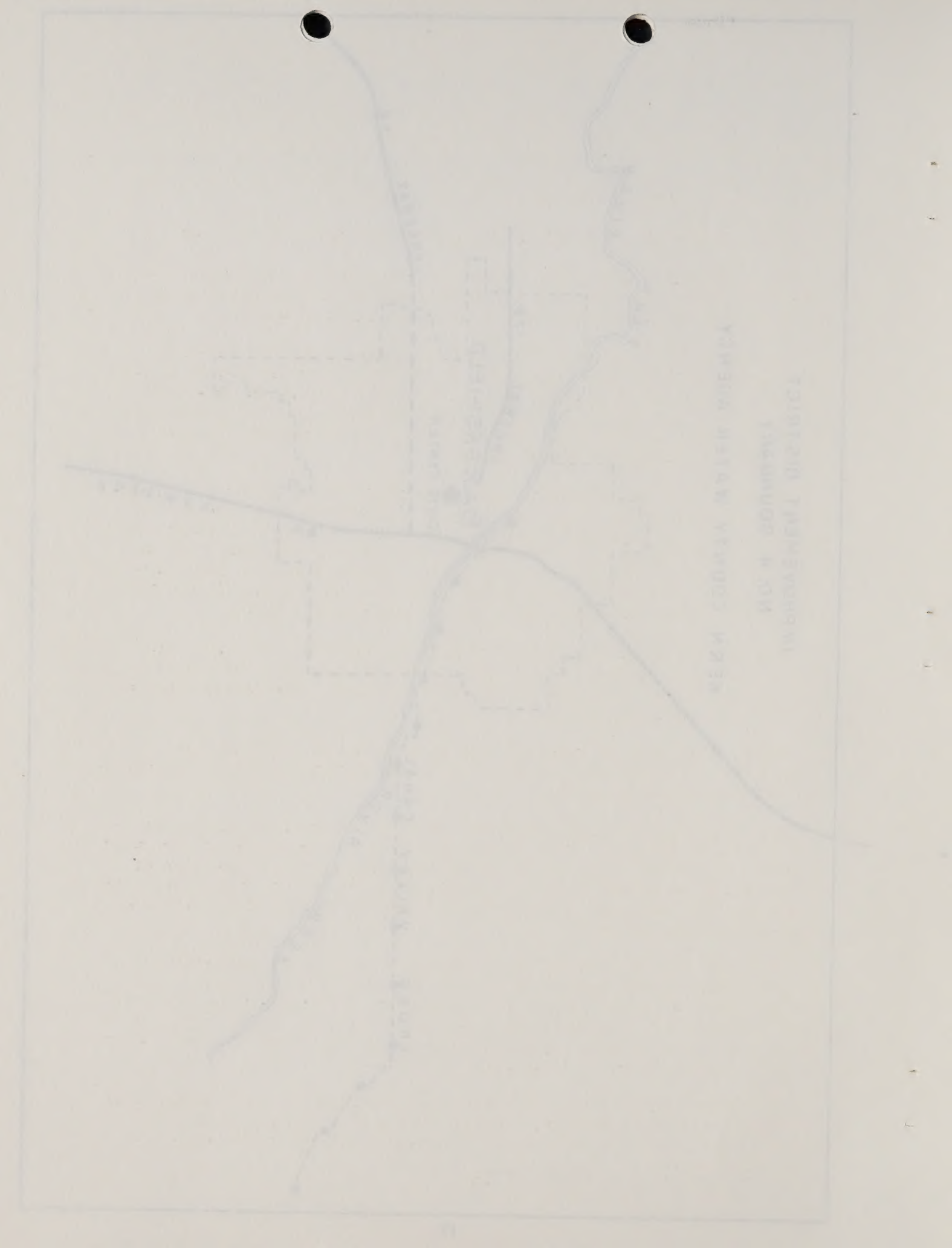
Treated water will be conveyed to portions of the City of Bakersfield from the treatment plant through a pipeline that will pass under the Kern River Channel, then easterly along the westerly extension of Columbus Avenue and Columbus Avenue to a point on the northerly extension of Fairfax Road and then at right angle south to the existing East Niles C S D storage tanks.

Three booster pumping plants will be required along the line, one near the treatment plant, one at River Boulevard, and the other at Wenatchee Avenue.

The water purveyors with service areas in the City are awaiting the completion of the Cross Valley Canal and related projects so their existing systems may be re-evaluated.

Since the City is developing westerly and southwesterly, water facilities will be most urgently needed in this area.


IMPROVEMENT DISTRICT
NO. 4 BOUNDARY
KERN COUNTY WATER AGENCY
KERN RIVER
FREEWAY 178
BAKERSFIELD
CIVIC CENTER
CROSS VALLEY CANAL
KERN RIVER
FREEWAY 58
99
FREEWAY



Capital Projects

The Cross Valley Canal will be a joint use facility providing water service to Rosedale - Rio Bravo WSD, Cawelo WD, Improvement District #4, and possibly others. The canal will begin at a turnout from the California Aqueduct near Tupman and extend eastward approximately 17 miles to the Friant - Kern Canal of the Central Valley Project.

This section of the canal is designated as "Reaches I, II, and III.

Reach IV will begin at the terminus of Reach III at the Friant - Kern Canal and extend approximately 4.3 miles northeasterly paralleling the north bank of the Kern River to a point below Calloway Weir.

Reaches I, II, and III of the canal will have a uniform concrete - lined cross section, with capacities of 450 cubic feet per second at the Tupman turnout, and decreasing to 411 cubic feet per second on Reach I, 381 cubic feet per second on Reach II and 321 cubic feet per second on Reach III. The uniform cross section is able to accommodate varying capacities by changes in bottom slope.

Reach IV will be unlined to facilitate percolation to the ground water basin within the urban area. The flow in the unlined canal between its beginning and the uppermost reach will decrease as water is allowed to infiltrate through the permeable bottom and sides of the canal, and as water is diverted into the recharge areas. Turnouts will be located on the riverward side of the canal where water will be discharged into the Kern River channel for percolation to the ground water basin.

The unlined canal will have a trapezoidal section with 2 to 1 side slopes and a bottom width of 14 feet. Depth of water will be 6.5 feet with an additional freeboard allowance of 3.5 feet. The design capacity is 276 cubic feet per second.

Major structures of Reach IV will be required to pass the canal under Friant - Kern Canal, Santa Fe Railroad, Highway 99, Golden State Highway and 24th Street crossing.

The Cross Valley Canal will carry water in a direction adverse to the general topography. This necessitiates the installation of nine pumping plants. Each plant will consist of several pumping units, the size of which will be selected to allow flexibility in day to day operations. All pumps will be electrically powered, with constant speed, three phase, 440 - volt synchronous motors.

In Reach IV, the pumping plant structures will be of sufficient size to accommodate pumps capable of lifting 276 cubic feet per second, the full design capacity of the Reach. It is probable that only sufficient pumps will be installed intially to lift 210 cubic feet per second, which is the amount necessary to supply the maximum peak delivery rate to Cawelo WD and to the treatment plant and recharge facilities.

A corporation yard will be constructed adjacent to the treatment plant. The yard will include shops, storage space for spare parts and parking area for vehicles from which canal maintenance and operation activities will be carried out.

Capital projects also includes groundwater recharge facilities, dikes and roads, water treatment plant and treated water conveyance facilities.

Obstacles

No obstacle for the construction of the Cross Valley Canal and related facilities is anticipated.

Citizen's Participation

Citizens were involved in the formulation of Improvement District #4, a subdivision of the Kern County Water Agency. The subdivision was created to plan and manage that portion of the water entitlement allotted to the urban Bakersfield area.

Prior to the creation of Improvement District #4, many meetings were held over a period of years with the Citizens Committee on water, League of Women Voters, other women's organizations, Civic and Service organizations, as well as joint City - County open meetings.

Pros and cons on the merit of a new agency, or whether an existing entity such as the Ctiy of Bakersfield, or the Kern County Water Agency itself might be best suited to handle the venture before a final determination was made for the creation of an Improvement District.

Citizens also participated on the formulation of the Cross Valley Project, consideration was given to two types of alternatives: (a) alternatives to the entire project, and (b) alternatives to specific project feautres. In the first category, consideration was given to the possible consequences of not providing any supplemental supply, and also to providing a supply to participating districts through an exchange with holders of water rights to Kern River. In the second category, alternative routes for the canal were considered, as were alternative methods for conveying water from the California Aqueduct to contracting entities on the eastern side of the valley. Consideration was also given to alternative methods for providing potable water to urban domestic customers and to alternative locations for ground water recharge facilities.

Financing

The construction cost of the Cross Valley Canal and related projects apportioned to Urban Bakersfield will be funded through the sales of bond issues passed by the voters in September, 1972.

The cost of imported water will be paid for through assessment by zones of benefit, by use extraction tax, and by treated water charge.

Construction of new pipelines to new developing areas will be privately financed by the water purveyors.

Time Schedule - Priorities

As mentioned previously, the plan of the Cross Valley Canal Project is not firm. Precise engineering drawings have not been developed.

The construction target date is 1974 and the target completion date is 1975.

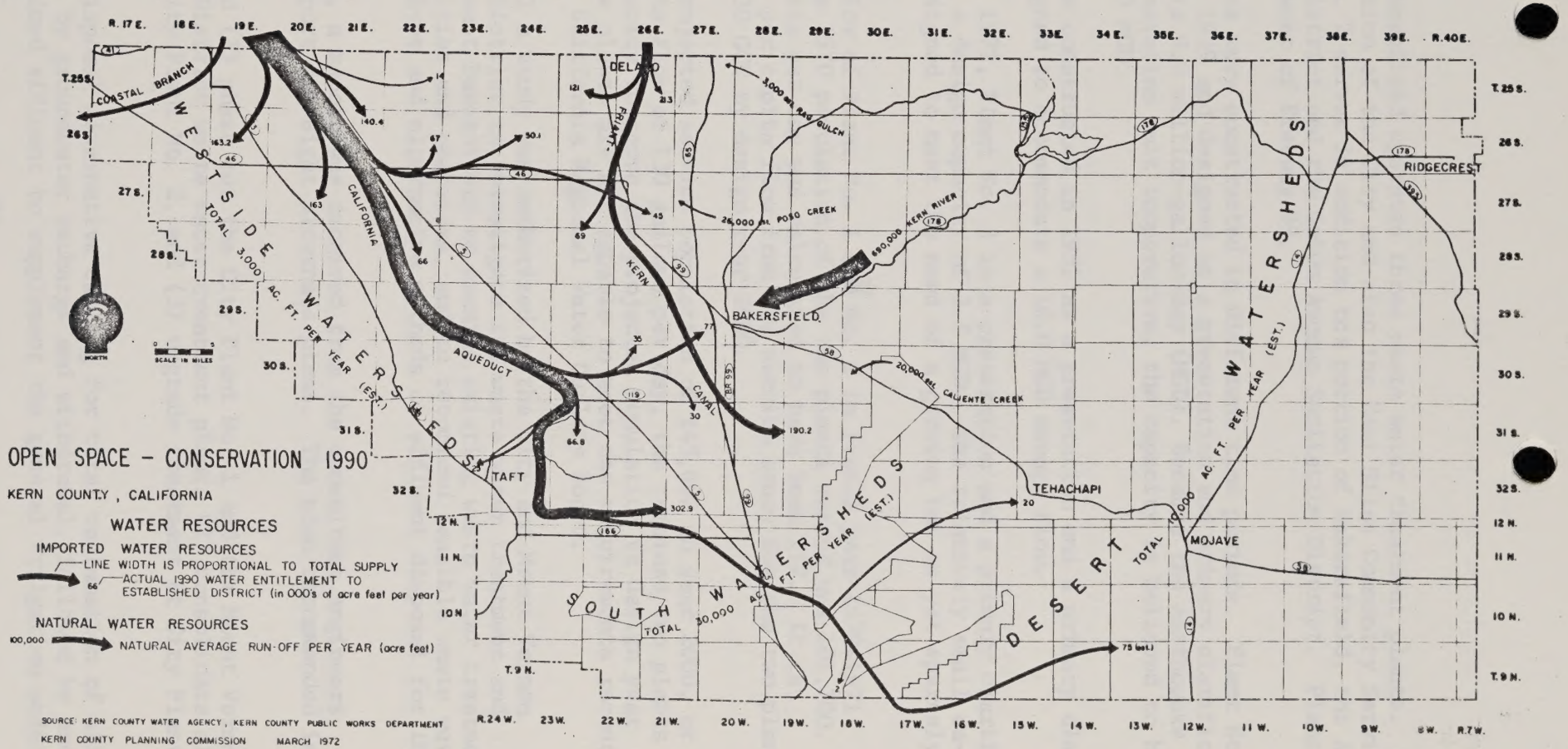
The construction of other facilities such as treatment plant or well fields, treated water conveyance facilities may not begin until 1975 or 1976.

Relationship of Plan for Natural Resource Land to Other Plans and Elements of the General Plan.

The adopted elements of the Bakersfield General Plan includes Land Use, Circulation, Housing, and Public Service Facilities. These elements or plans were developed to provide for the well being, and convenience for a X number of projected people to target year 1990.

The projections were made under the assumption that quality water would be available to sustain the projected population. Without a plan to supplement the existing source of ground water, it is questionable if the projected number can be sustained, in view of the estimated annual overdraft. There is no question, however, that the price of water would be much higher and the quality would be much lower without supplemental water.

The Water Plan, a component of the "Conservation Resources Element" relates to all other elements of the General Plan.


OPEN SPACE - CONSERVATION 1990
KERN COUNTY, CALIFORNIA
WATER RESOURCES
IMPORTED WATER RESOURCES
LINE WIDTH IS PROPORTIONAL TO TOTAL SUPPLY
66 ACTUAL 1990 WATER ENTITLEMENT TO ESTABLISHED DISTRICT (in 000's of acre feet per year)
NATURAL WATER RESOURCES
100,000 NATURAL AVERAGE RUN-OFF PER YEAR (acre feet)
SOURCE: KERN COUNTY WATER AGENCY, KERN COUNTY PUBLIC WORKS DEPARTMENT
KERN COUNTY PLANNING COMMISSION MARCH 1972
COASTAL BRANCH
CALIFORNIA AQUEDUCT
DELANO
FRUITVALE CANAL
KERN
3,000 ac. RAG GULCH
26,000 ac. POSO CREEK
680,000 KERN RIVER
20,000 ac. CALIENTE CREEK
BAKERSFIELD
TAFT
TEHACHAPI
MOJAVE
RIDGECREST
WESTSIDE WATERSHEDS
TOTAL 3,000 AC. FT. PER YEAR (EST.)
SOUTH WATERSHEDS
TOTAL 30,000 AC. FT. PER YEAR (EST.)
DESERT WATERSHEDS
TOTAL 10,000 AC. FT. PER YEAR (EST.)
SCALE IN MILES
NORTH
R.17E. 18E. 19E. 20E. 21E. 22E. 23E. 24E. 25E. 26E. 27E. 28E. 29E. 30E. 31E. 32E. 33E. 34E. 35E. 36E. 37E. 38E. 39E. R.40E.
R.24W. 23W. 22W. 21W. 20W. 19W. 18W. 17W. 16W. 15W. 14W. 13W. 12W. 11W. 10W. 9W. 8W. R.7W.
T.25S. 26S. 27S. 28S. 29S. 30S. 31S. 32S. T.9N. 10N. 11N. 12N.



Waste Water

The City of Bakersfield operates three waste water treatment plants. Plant No. 1 serves a portion of the City and also the East Niles Community Service District; Plant No. 2 serves in addition to a portion of Bakersfield, the Alta Verde Sanitation District and the Union Avenue Sanitation District. Plant No. 3 serves the area west of Freeway 99.

The three plants were constructed in different time periods. Plant No. 1 was constructed in 1939 and designed as a preaeration and primary clarification plant to accommodate 9.0 million-gallon-day (MGD). Because the earthquake of 1952 rendered the aeration unit inoperative, the capacity is believed to have been reduced to 5.5 MGD.

Plant No. 2 was constructed in 1952 as a preaeration and a primary clarification plant, designed to accommodate a 16.0 MGD sweage flow.

Constructed in 1972, Plant No. 3 is a preaeration and a primary clarification plant, having a design capacity of 3.5 MGD. The relatively small capacity plant is designed to meet the need of a growing but as yet sparsely settled area.

The combined flow of Plant No. 1 and No. 2 in fiscal year 1970-1971 was 11.34 MGD. The 1970 population of the two plants served was 101,700. The gallon per capita per day was calculated to have been 112. It is estimated that the per capita flow from the service areas for the two plants will increase to 130 GCD by design year 2000.

Based on the projected service population of 145,600 in year 2000, at the projected per capita flow of 130 gallons per day, the combined two plants would have the capacity to serve the projected population to design year 2000. However, the plants are not capable to meet the requirements recently established by the California Regional Water Quality Board.

In August, 1972 a study was authorized by the City and Mount Vernon County Sanitation District to investigate the waste water treatment and disposal for Southeast Bakersfield to examine existing waste water treatment and disposal facilities and practices, and to recommend feasible waste water treatment alternatives and alternative methods of effluent disposal for the study area.

Im March, 1973, a report was received from the consultant engineers. Included in the report are eight alternate plans. The plan recommended is Alternate III-B.

This plan would (1) phase out the City Plant No. 1 and the Mount Vernon County Sanitation District waste water treatment plant, (2) consolidate all treatment at the City Plant No. 2, and (3) upgrade treatment at City Plant No. 2.

The effluent disposal alternative calling for total reclamation of all secondary effluent by groundwater recharge and withdrawal, followed by exportation of reclaimed effluent to supplement the general irrigation water supply of the area.

The preparation of a project report, which includes those elements required for application for grant funds through the California Water Resources Control Board and the Environmental Protection Agency be authorized. These elements includes the results of this feasibility study together with the following:

a) Preliminary design of adopted alternatives
b) Bypass analysis
c) Implementation schedule
d) Environmental impact
e) Operation and maintenance program
f) Financial plan
g) Revenue program

An application for grant assistance based on a combined project cost for treatment and disposal be made.

Public hearings on the proposed project be conducted and management study, be initiated to determine the political arrangements required for the administrative consolidation of all three plants.

Preliminary negotiation with the Kern County Water Agency be initiated to determine possible exportation arrangements for reclaimed water.

A reconnaissance field survey be conducted as soon as practicable to determine the availability of potential ground water recharge and withdrawal sites in the vicinity of the existing treatment facilities. If fruitful, the field survey be followed by a detailed site investigation and eventually pilot studies at the selected site.

Should ground water recharge and withdrawal prove to be unfeasible, then total waste water reclamation by in plant rapid sand filtration followed by disinfection be adopted as the plan for effluent disposal.

The lease contract with the growers for management of the existing disposal sites be renewed for up to three years until the transition can be made to consolidated treatment and waste water reclamation. The contracts should require that the fall and winter time hydraulic and nitrogen overload of the existing disposal sites be minimized by growing crops that will maximize the consumptive use of water and uptake of nitrogen during periods of low crop use.

The feasibility of using reclaimed waste water for recreational purposes prior to exportation for irrigation should be investigated further.

2. HYDRAULIC FORCE OF WATER

The hydraulic force of water can be devastating in certain instances. Dry stream beds become torrents during rain storms, sheet floods traverse flat terraces, and streams enlarge to the point where they fill the flood plain.

There are areas that are so adversely affected by the hydraulic forces of water that their use should be restricted to that of open space. No structural development should be permitted in these areas because of the hazard that exists.

Other areas are adversely affected by the hydraulic forces of water, however, the forces do not reach the same magnitude as those described above. In these areas special construction methods and standards must be employed.

Goals

It is the goal of the city to implement a program that minimizes the danger caused by hydraulic forces of surface water.

Policy

1. Minimize areas in which water hazards exist, in order to protect the lives and property of the citizens.

2. Engineering studies should be made to determine the hazardous areas.

3. Areas identified as being adversely effected by hydraulic forces should be zones in a manner that provides the degree of safety compatible with the degree of risk.

4. To provide for storm water discharge in a manner that protects development from the hydraulic forces of storm waters.

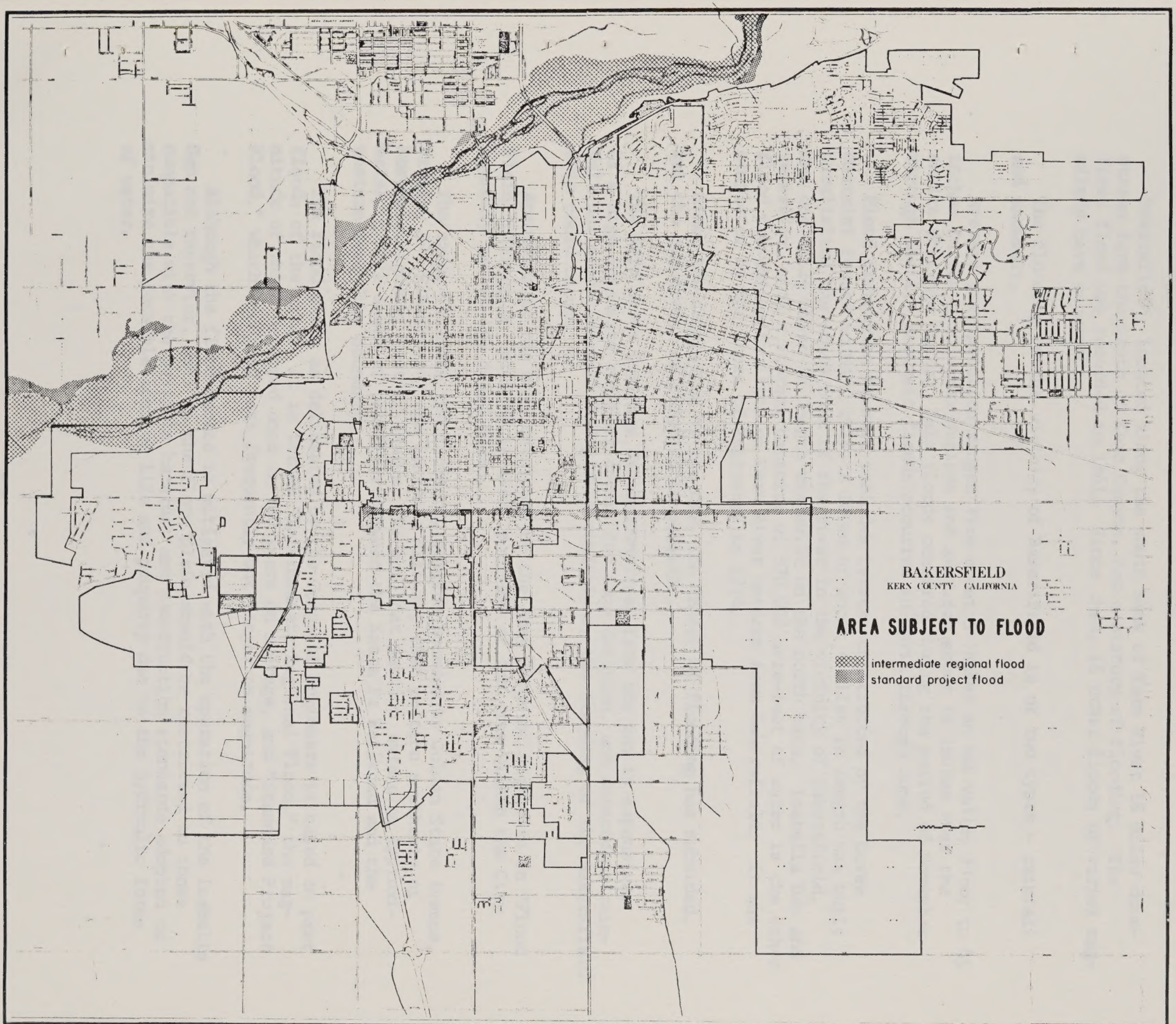
5. Implement a management program to prevent the erosion of soils, sand, and minerals.

Implementation

1. Obtain engineering studies from the Corps of Engineers which identify hazardous areas.

2. Zone areas to restrict their use in a manner commensurate with the established hazard and the degree of risk the community is willing to support.

3. Develop construction standards that insure that structures are adequately protected when constructed in hazardous areas and subjected to minor hydraulic forces.


BAKERSFIELD
KERN COUNTY CALIFORNIA
AREA SUBJECT TO FLOOD
intermediate regional flood
standard project flood



Hydraulic Force of Water

Bakersfield, located along the south bank of Kern River 16 miles downstream form the mouth of Kern Canyon, has a history of flooding. The first flood was recorded in 1861. Since then, 18 other floods of varies magnitude have occurred.

The flooding in the vicinity of Bakersfield is of two types - rainfall and snowmelt.

Average precipitation ranges from about 5 inches on the valley floor to 45 inches in the head water regions and averages about 16 inches over the entire drainage basin. Rain floods occurred during the period of November through April. Snowmelt floods occurred in April through June.

Flood prevention measure includes levees, constructed by the Levee District formed in May, 1928. A levee of about 4 miles in length was built paralleling the south bank of the river in the vicinity of Bakersfield, and one of $2\frac{1}{2}$ miles in length was built on the north bank. Isabella Dam and reservior, with a storage capacity of 570,000 acre-feet of water is the other flood prevention facility on Kern River upstram from Bakersfield. It was completed by the Coprs of Engineers in 1954.

Since the completion of the dam, the threat of flooding has subsided, but the recurrence of flooding is possible.

The Kern River Drainage Basin downstream from the dam is expansive. If a high intensity rainfall occurs for some duration, and antecedent rainfall has produced saturated ground conditions, the flooding of the Bakersfield area could occur.

According to the maps developed by the Army Corps of Engineers on "Flood Plain Information" printed in 1969, portions of the area within the City boundary are in the flood plain.

The areas includes the southerly portion bounded by Golden State Avenue, Freeway 99, Elm Street, and Rosedale Highway; that portion southerly of Rosedale Highway, west of Freeway 99; and that portion extending approximately $\frac{1}{2}$ mile south of the river between the Santa Fe Railroad and the western most City boundary.

The flood plain as delineated by the Corps of Engineers is based on past floods of the area. It is termed "Intermediate Regional Flood," the magnitude of which occurred once in 100 years on average, and "Standard Project Flood," which occurred less frequently but larger in magnitude.

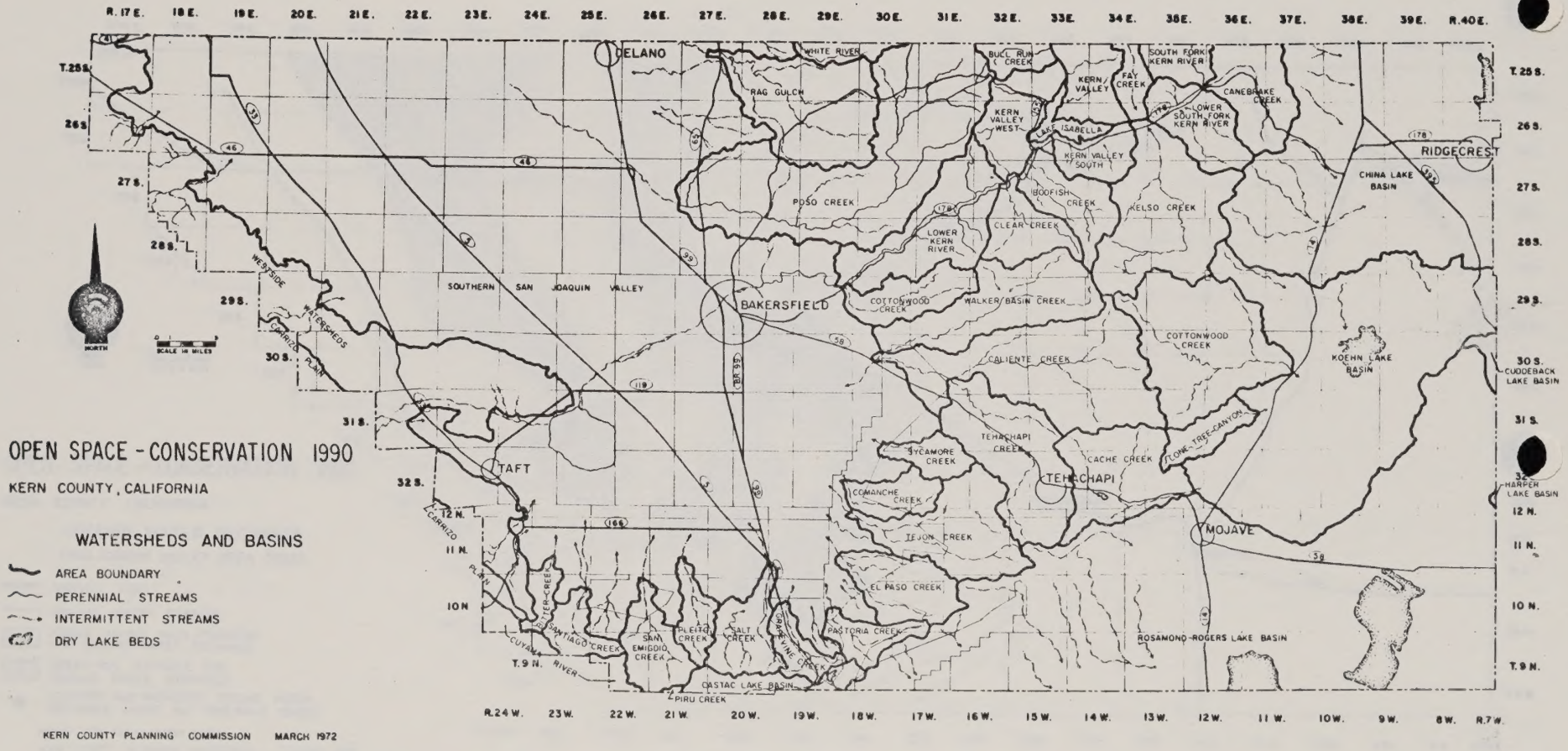
Although the flood menace is mitigated with the operation of the Isabella Dam and reservior, uses in the flood plain should be restricted to those compatible with the possible hazards, and construction standards adopted to minimize the possible loss of life and property due to the hydraulic force of water.

Storm Drainage Facilities

Existing facilities within the City consist of street flow, closed conduits, open channels, and retention basins. These facilities and those of the County areas adjacent to Bakersfield are shown on maps E and F of the Public Services and Facilities Element of the Bakersfield Area General Plan.

The drainage system utilizes the streets to carry run-off until the quantity has reached the capacity of the street. At this point run-off in excess of street capacity is carried in closed conduit to natural drainage courses or retention basins.

Drainage for the area east of Central Bakersfield is facilitated through a cooperative agreement with the City of Bakersfield, County of Kern, and the State of California, Division of Highways. A system of conduits and retention basins has been made a component of the scheduled freeway construction for State Route 58 between Cottonwood Road and Weedpatch Highway. These major drainage facilities have been integrated into the overall plan for this area.



OPEN SPACE - CONSERVATION 1990

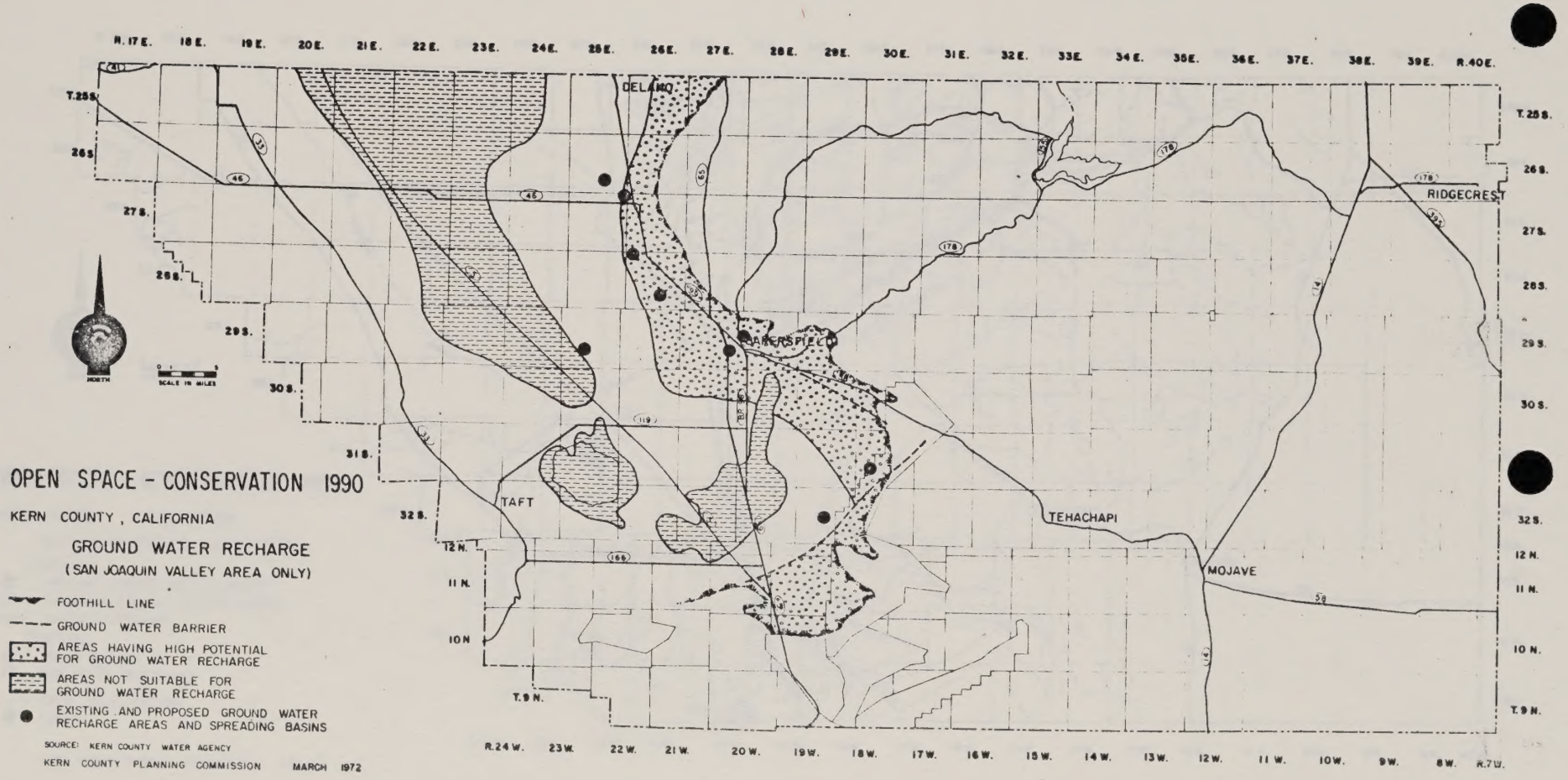
KERN COUNTY, CALIFORNIA

WATERSHEDS AND BASINS

- AREA BOUNDARY
- PERENNIAL STREAMS
- INTERMITTENT STREAMS
- DRY LAKE BEDS

KERN COUNTY PLANNING COMMISSION MARCH 1972





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KERN COUNTY, CALIFORNIA

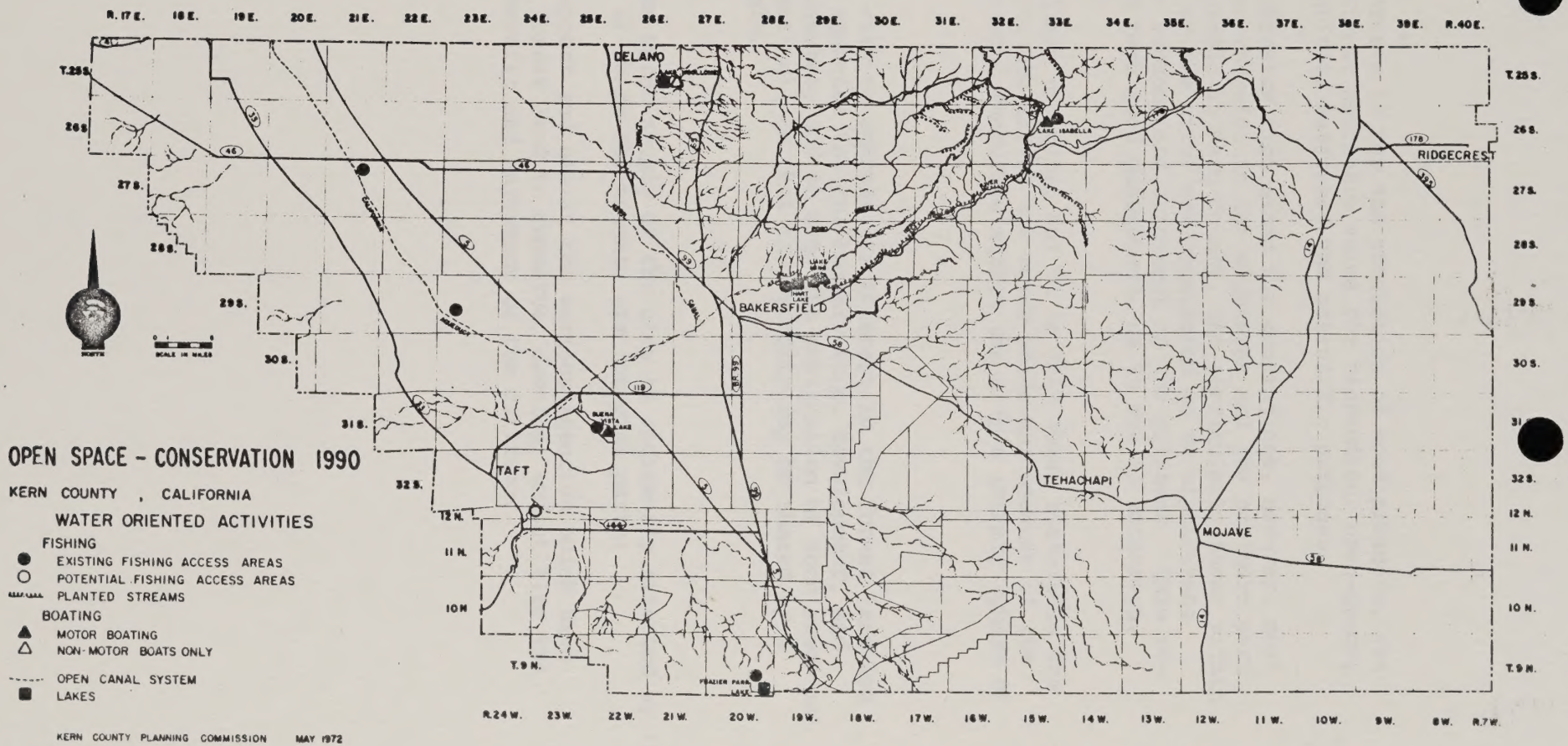
GROUND WATER RECHARGE
(SAN JOAQUIN VALLEY AREA ONLY)

- FOOTHILL LINE
- GROUND WATER BARRIER
- AREAS HAVING HIGH POTENTIAL FOR GROUND WATER RECHARGE
- AREAS NOT SUITABLE FOR GROUND WATER RECHARGE
- EXISTING AND PROPOSED GROUND WATER RECHARGE AREAS AND SPREADING BASINS

SOURCE: KERN COUNTY WATER AGENCY

KERN COUNTY PLANNING COMMISSION MARCH 1972





OPEN SPACE - CONSERVATION 1990

KERN COUNTY , CALIFORNIA

WATER ORIENTED ACTIVITIES

FISHING

- ● EXISTING FISHING ACCESS AREAS
- ○ POTENTIAL FISHING ACCESS AREAS
- PLANTED STREAMS

BOATING

- ▲ MOTOR BOATING
- △ NON-MOTOR BOATS ONLY

- OPEN CANAL SYSTEM
- ■ LAKES

KERN COUNTY PLANNING COMMISSION MAY 1972



3. FORESTS

The primary value of forests is for the production of wood products, yet they have a very significant secondary value for recreation, open-space, wilderness, wildlife habitat, watershed, and scientific purposes.

California has been a forestry rich state for generations, however, most of the resources are concentrated in the mountains and the northern part of the state. Those forests in Kern County, and particularly those within the sphere of interest of the city, are considered to be significant resources, vital to the economy and enjoyment of the citizens. This resource is one that must have good management, so it can be conserved, developed, and utilized.

Forests do not exist within the city, but it is felt these statements are necessary because the forests affect the water sheds and because of the people's concern for natural resources within the city's primary sphere of interest.

Goals

It is the goal of the city to express its interest in the forest land and work with the various agencies for the conservation, development, and utilization of this resource; and to urge the designation of such areas as multiple use where practical, so that the benefits may be shared by a greater number of people.

Policy

To the extent that the water supply of the city is indirectly affected by the watershed management, of which the forests are integral parts:

It is the policy to support and assist the various agencies which have jurisdiction over the forest land to conserve, develop, and utilize the forest lands for the benefit and enjoyment of the citizens.

4. SOILS

Many factors influence the value and use of soil, such as the degree of compaction in the subsoil, salt content, steepness of slope, drainage, and natural fertility. The amount of alkali salts is closely correlated with the degree of compaction and permeability of the subsoil in basin areas.

Many factors besides the character of the soil influences the suitability of crops in an area. The most important is the availability of water for irrigation. Soils derived from certain rocks are more fertile than others; some are suitable to one crop, but not to another. Many elements of the agricultural industries depend on the nature of the vegetation, which in turn is directly related to the geological formation from which the soil was derived.

Some soils are extremely vulnerable to erosional forces. The natural balance of nature can be upset by improper cut and fill operations. This is particularly true in urban areas where new developments are taking place. In urban areas soil erosion is often triggered by improper grading procedures which expose steep slopes to the forces of running water.

It is important that prime agricultural soils are preserved for agricultural uses and that other soils are used in accordance with their structural and compositional characteristics. It is also important to prevent erosion of the soils, and particularly that erosion which is caused by inappropriate grading practices and is controllable.

Goals

It is the goal of the city to develop land uses that are compatible with the capability of the soil and to discourage the improper use or waste of the soil by inappropriate use or erosional forces.

To prudently utilize the inherent capabilities of all soil groups to serve both short and long term interest.

Policies

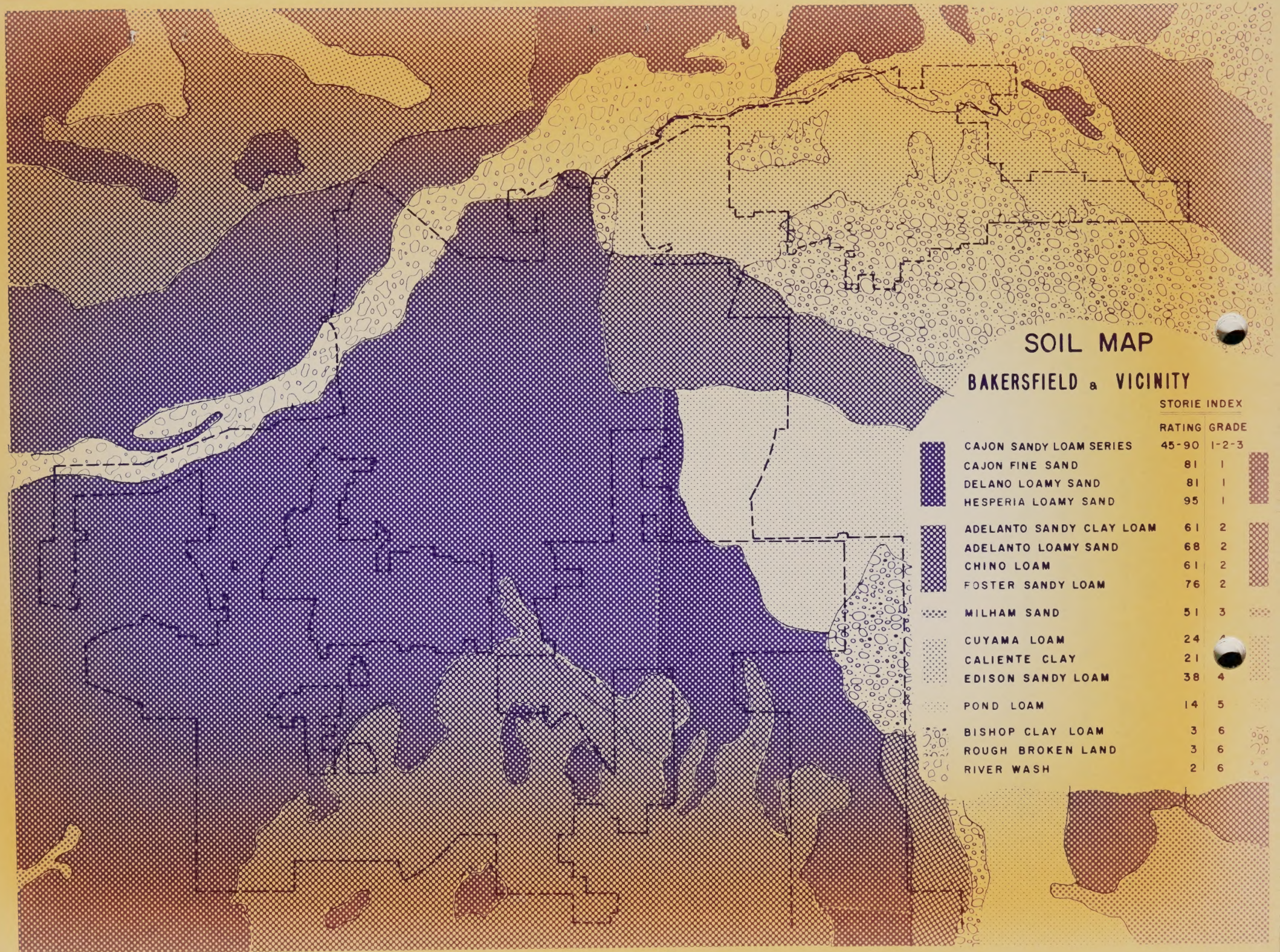
1. The city will identify, as far as present day technology permits, areas of unstable soil.

2. Development in all areas should be governed by the capability of the soil to sustain such development.

3. Intensive agricultural land conservation program should be restricted to lands having soils capable of supporting intensive agricultural activities which are economically feasible.

4. Steep and erosive soils should be protected from unnecessary development.

5. Suitable soil conservation measures in all areas of Kern County should be encouraged.


SOIL MAP
BAKERSFIELD & VICINITY
STORIE INDEX
RATING
GRADE
CAJON SANDY LOAM SERIES 45-90 1-2-3
CAJON FINE SAND 81 1
DELANO LOAMY SAND 81 1
HESPERIA LOAMY SAND 95 1
ADELANTO SANDY CLAY LOAM 61 2
ADELANTO LOAMY SAND 68 2
CHINO LOAM 61 2
FOSTER SANDY LOAM 76 2
MILHAM SAND 51 3
CUYAMA LOAM 24
CALIENTE CLAY 21
EDISON SANDY LOAM 38 4
POND LOAM 14 5
BISHOP CLAY LOAM 3 6
ROUGH BROKEN LAND 3 6
RIVER WASH 2 6

Implementation

1. Zoning classification suitable to regulate the land use in accordance with the soil capability and in hazardous areas will be adopted.

2. The General Plan Land Use Element will be updated to include the land uses compatible with the soil capabilities.

3. Initiate studies to obtain precise maps and evaluate all soil groups in order to assist in implementing a conservation program.

Soils

Land (soils) within the Bakersfield City Boundaries is developed with urban uses, or is intended to be developed with urban uses in the near future. Since fertile land and non-fertile land alike is dedicated to the altar of urban uses, the matching of soil type to appropriate use other than urban uses is limited, however, desirable that other use might be.

Within that limitation, the City has adopted the Uniform Building Code, whereby Soils Report of certain new development is required. The Soils Report includes that of a Civil Engineer and Geology Engineer as to the nature, site, compaction, distribution and strength of the soil and their conclusions and recommendations.

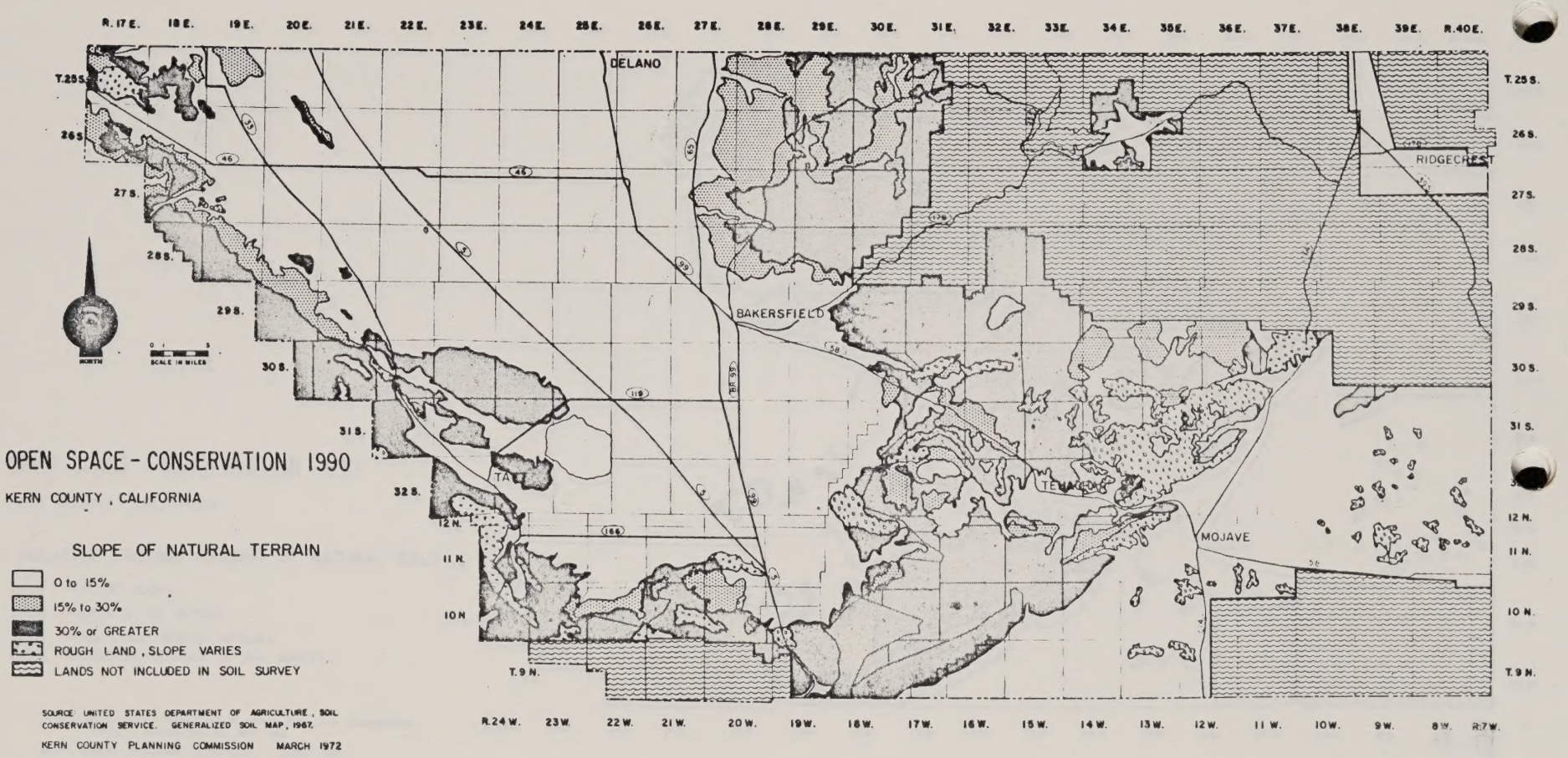
There are several types of soils found within the City of Bakersfield. These comprised the Cajon Fine Sand Series, Cajon Sandy Loam Series, Delano Loamy Sand, Foster Sandy Loam Series, Cuyama Loam, Adelante Loamy Sand, Rough Broken Land, and River Wash, found adjacent to Kern River.

According to the Storie Index Rating, the soils of Bakersfield are fertile, by and large. The adverse element found in some soil type is the presence of alkali. Some types are spotted with alkali, and some contains moderate to strong alkali. While the fertility of the Foster Sandy Loam Series is good, the drainage is restricted.

Cuyama Loam Soil is found on the northeast part of the City. This type of soil is rough and low in fertility. Within this area is a small island containing a type of soil called Rough Broken Land. In its original state, this area was steep and the soil eroded.

Bakersfield has had no experience with any particular type of soil as being unstable. Although some soil subsidence were experience with dwellings built on filled sites, it was believed that the subsidence was the fault of improper compaction rather than caused by a particular type of soil.

At present not enough is known of seismic activities, active faults etc., in and around Bakersfield to formulate a meaningful ordinance to regulate urban use activities. An agreement was signed between the City and Kern Council of Governments to cause a seismic Safety Element to be prepared. When that is completed and studied, an ordinance may be formulated based on the information and recommendation of consultants having technical competence.



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KERN COUNTY, CALIFORNIA

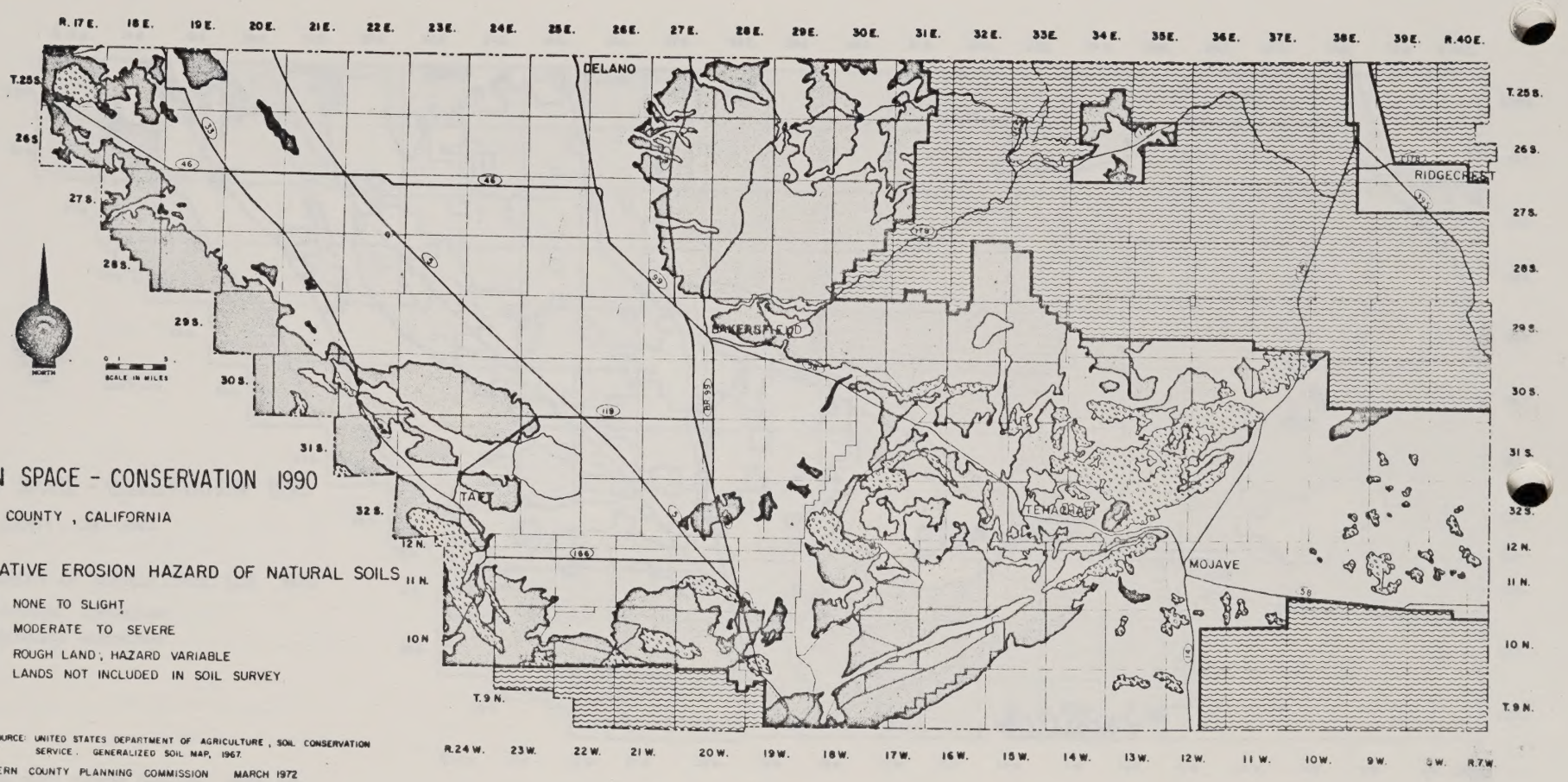
SLOPE OF NATURAL TERRAIN

- 0 to 15%
- 15% to 30%
- 30% or GREATER
- ROUGH LAND, SLOPE VARIES
- LANDS NOT INCLUDED IN SOIL SURVEY

SOURCE: UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE. GENERALIZED SOIL MAP, 1967.

KERN COUNTY PLANNING COMMISSION MARCH 1972





OPEN SPACE - CONSERVATION 1990

KERN COUNTY , CALIFORNIA

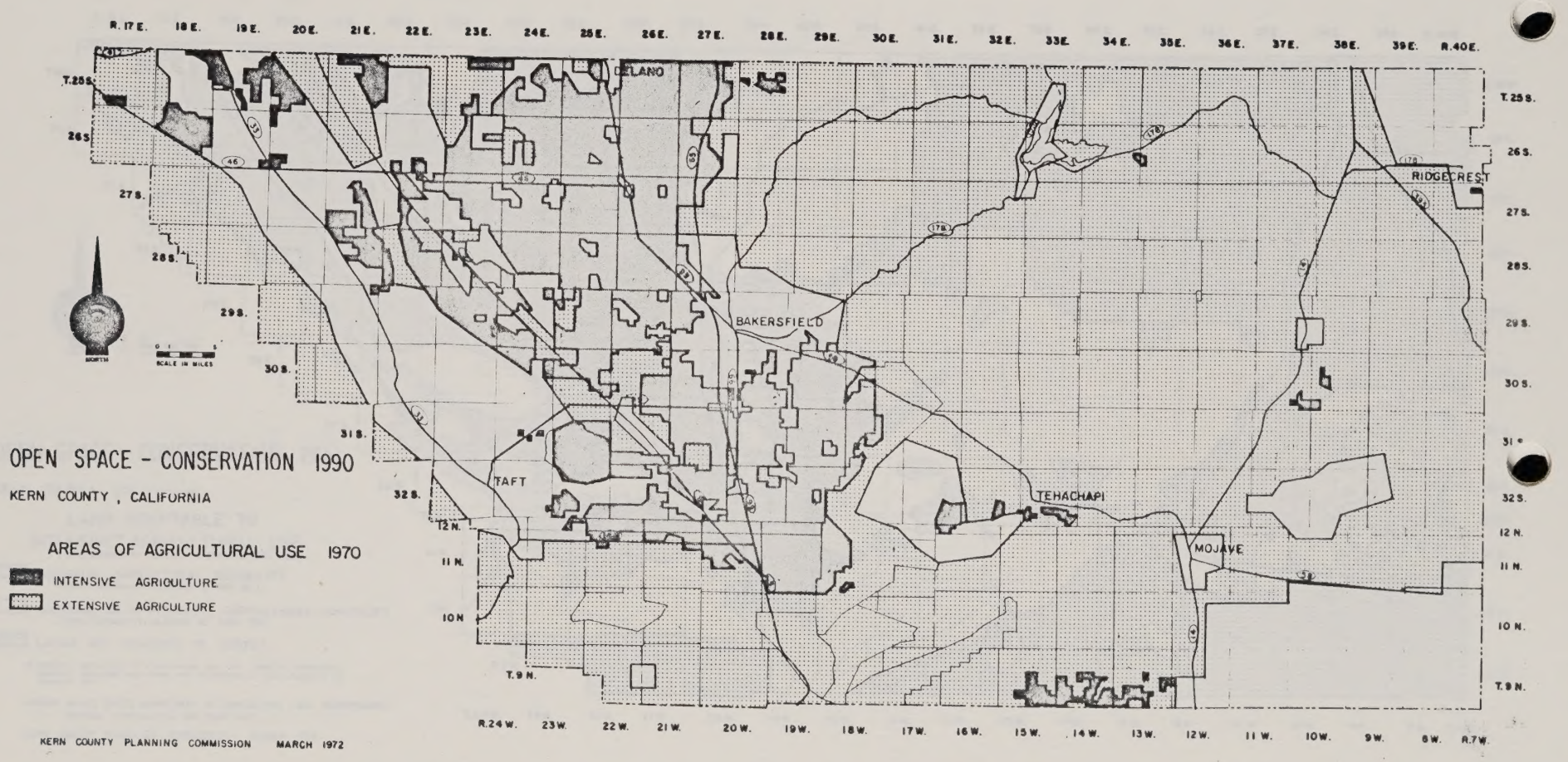
RELATIVE EROSION HAZARD OF NATURAL SOILS

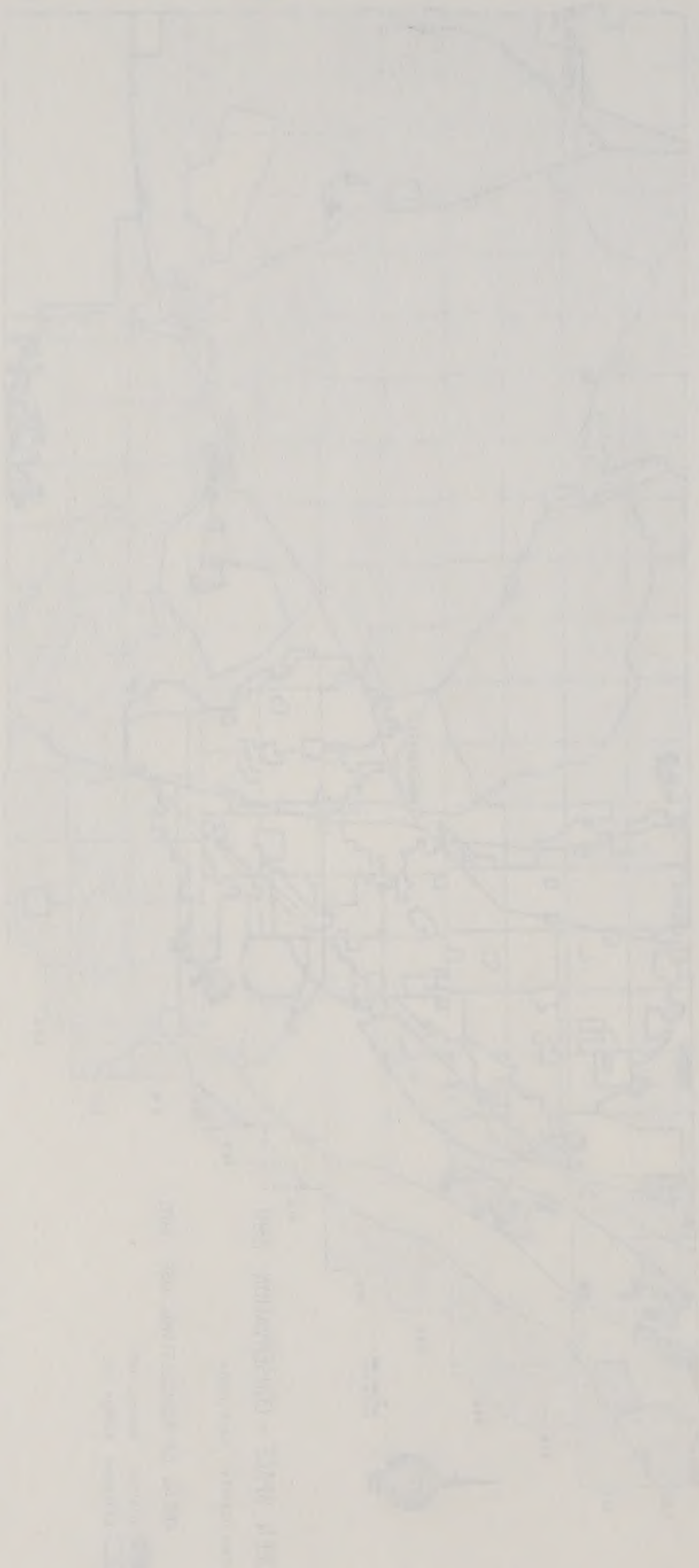
- NONE TO SLIGHT
- MODERATE TO SEVERE
- ROUGH LAND; HAZARD VARIABLE
- LANDS NOT INCLUDED IN SOIL SURVEY

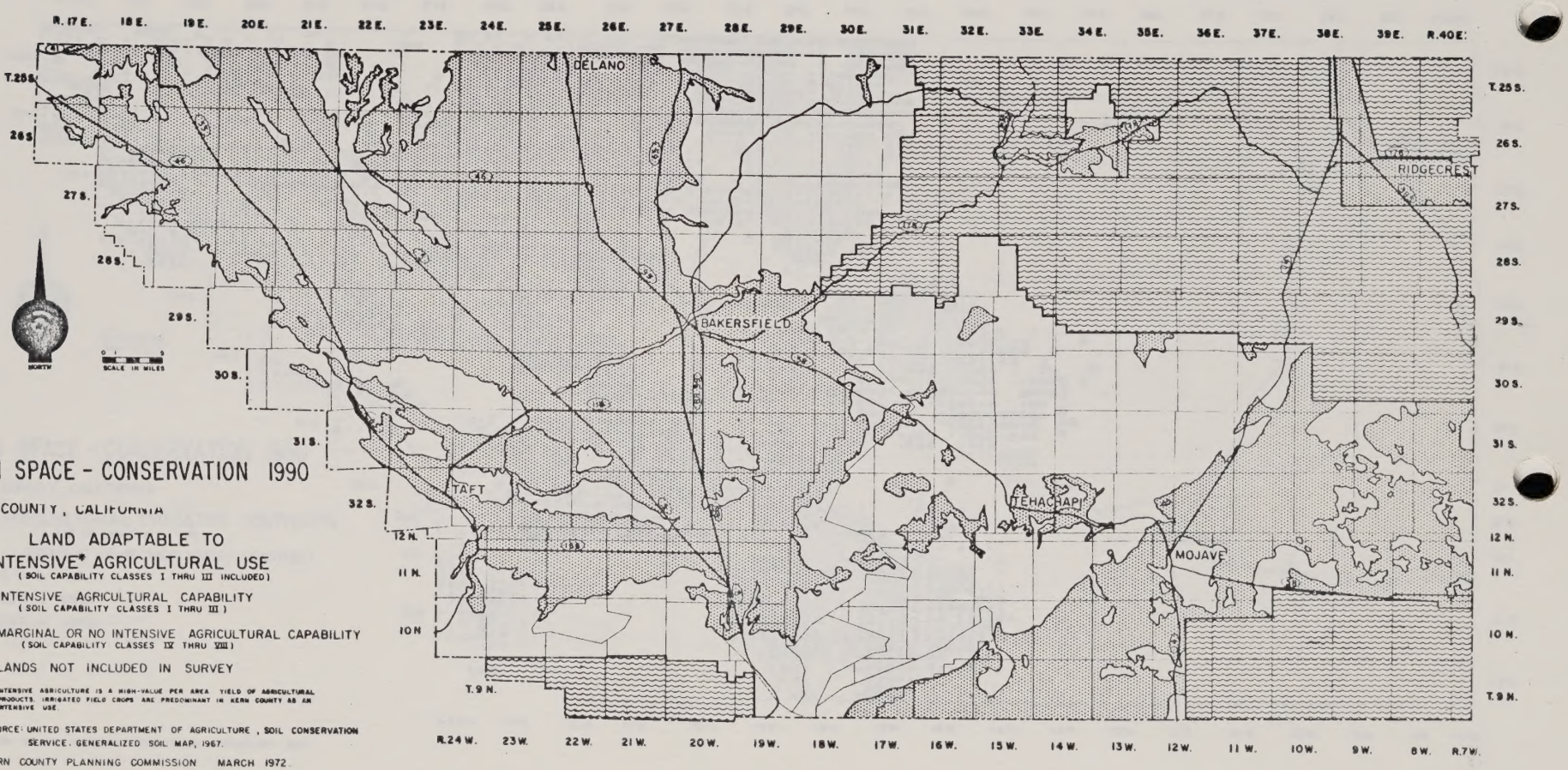
SOURCE: UNITED STATES DEPARTMENT OF AGRICULTURE , SOIL CONSERVATION SERVICE . GENERALIZED SOIL MAP, 1967.

KERN COUNTY PLANNING COMMISSION MARCH 1972




R. 17 E. 18 E. 19 E. 20 E. 21 E. 22 E. 23 E. 24 E. 25 E. 26 E. 27 E. 28 E. 29 E. 30 E. 31 E. 32 E. 33 E. 34 E. 35 E. 36 E. 37 E. 38 E. 39 E. R. 40 E.
T. 25 S.
26 S.
27 S.
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29 S.
30 S.
31 S.
32 S.
T. 12 N.
11 N.
10 N.
T. 9 N.
R. 24 W. 23 W. 22 W. 21 W. 20 W. 19 W. 18 W. 17 W. 16 W. 15 W. 14 W. 13 W. 12 W. 11 W. 10 W. 9 W. 8 W. R. 7 W.
DELANO
BAKERSFIELD
TAFT
TEHACHAPI
MOJAVE
RIDGECREST
NORTH
SCALE IN MILES
OPEN SPACE - CONSERVATION 1990
KERN COUNTY , CALIFORNIA
AREAS OF AGRICULTURAL USE 1970
INTENSIVE AGRICULTURE
EXTENSIVE AGRICULTURE
KERN COUNTY PLANNING COMMISSION MARCH 1972





OPEN SPACE - CONSERVATION 1990

KERN COUNTY, CALIFORNIA

LAND ADAPTABLE TO INTENSIVE* AGRICULTURAL USE

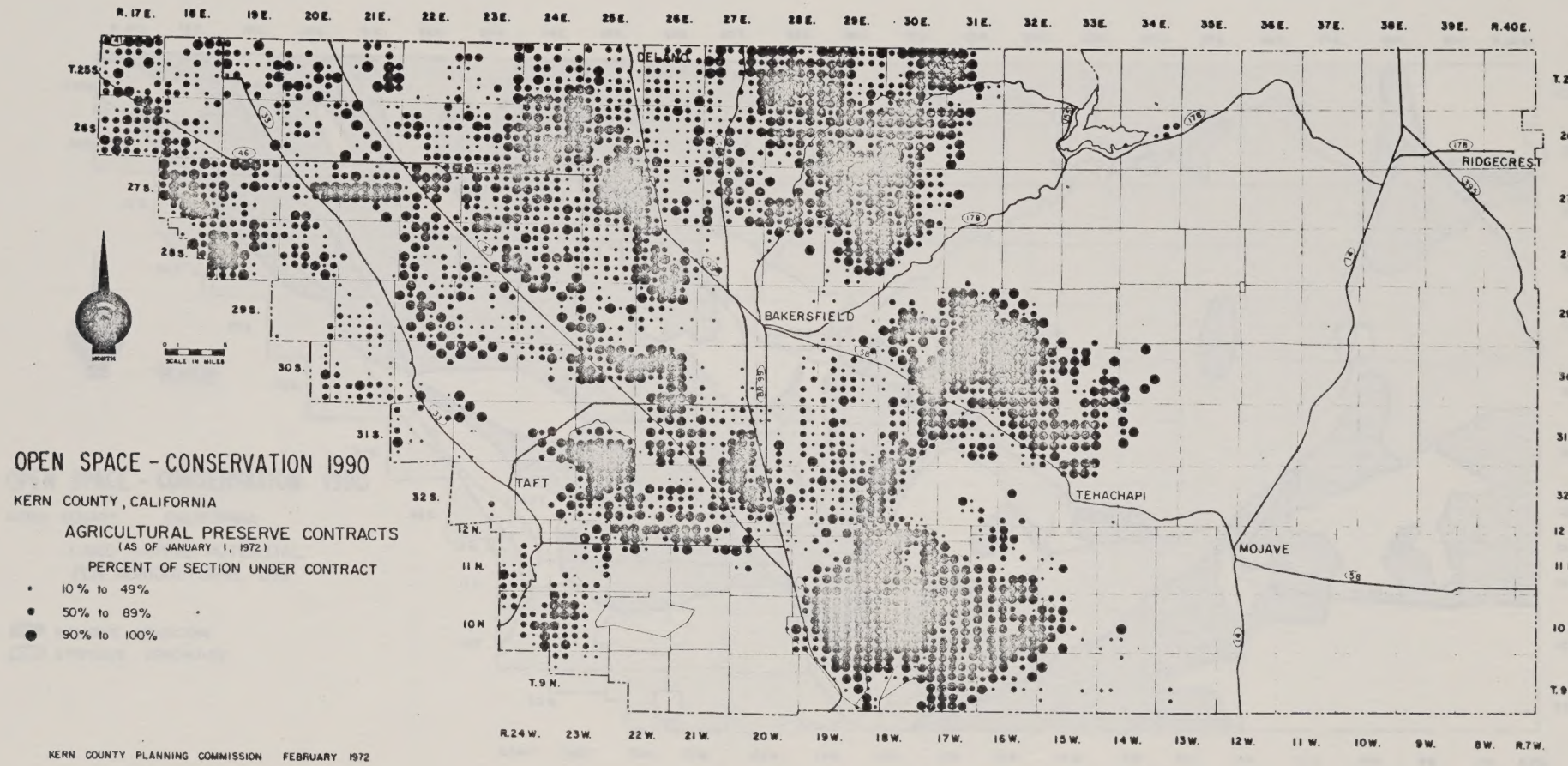
(SOIL CAPABILITY CLASSES I THRU III INCLUDED)

- INTENSIVE AGRICULTURAL CAPABILITY (SOIL CAPABILITY CLASSES I THRU III)
- MARGINAL OR NO INTENSIVE AGRICULTURAL CAPABILITY (SOIL CAPABILITY CLASSES IV THRU VIII)
- LANDS NOT INCLUDED IN SURVEY

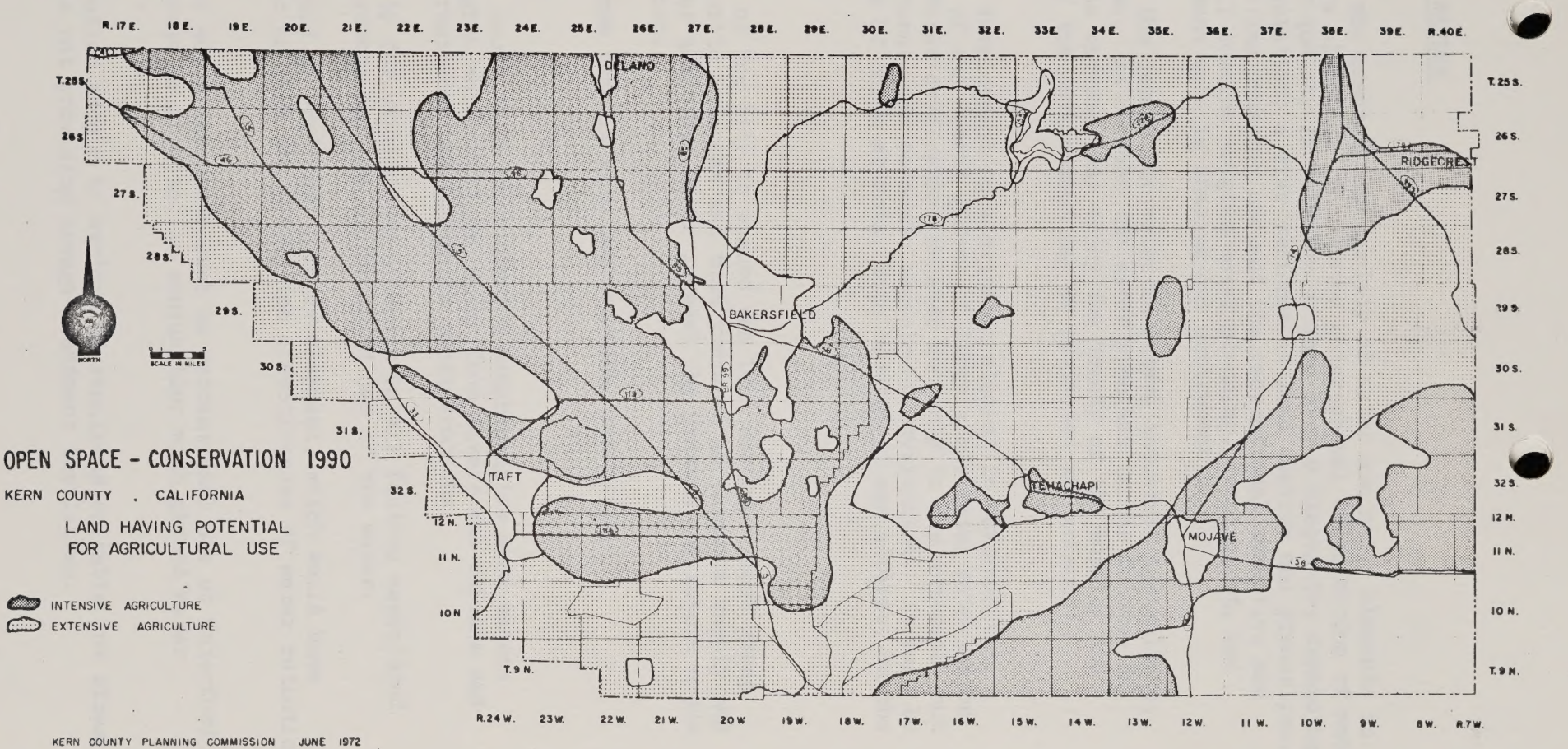
* INTENSIVE AGRICULTURE IS A HIGH-VALUE PER AREA YIELD OF AGRICULTURAL PRODUCTS. IRRIGATED FIELD CROPS ARE PREDOMINANT IN KERN COUNTY AS AN INTENSIVE USE.

SOURCE: UNITED STATES DEPARTMENT OF AGRICULTURE, SOIL CONSERVATION SERVICE. GENERALIZED SOIL MAP, 1967.

KERN COUNTY PLANNING COMMISSION MARCH 1972


R.17E. 18E. 19E. 20E. 21E. 22E. 23E. 24E. 25E. 26E. 27E. 28E. 29E. 30E. 31E. 32E. 33E. 34E. 35E. 36E. 37E. 38E. 39E. R.40E.
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DELANO
BAKERSFIELD
TAFT
TEHACHAPI
MOJAVE
RIDGECREST
NORTH
SCALE IN MILES
OPEN SPACE - CONSERVATION 1990
KERN COUNTY, CALIFORNIA
AGRICULTURAL PRESERVE CONTRACTS
(AS OF JANUARY 1, 1972)
PERCENT OF SECTION UNDER CONTRACT
10% to 49%
50% to 89%
90% to 100%
KERN COUNTY PLANNING COMMISSION FEBRUARY 1972




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TEHACHAPI
MOJAVE
NORTH
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OPEN SPACE - CONSERVATION 1990
KERN COUNTY . CALIFORNIA
LAND HAVING POTENTIAL
FOR AGRICULTURAL USE
INTENSIVE AGRICULTURE
EXTENSIVE AGRICULTURE
KERN COUNTY PLANNING COMMISSION JUNE 1972

5. RIVERS & OTHER WATERS

In water resources the quantity and quality of water are major elements in structuring land use planning. The uneven geographical distribution of water resources and water quality in relation to land use; a disparate, demanding urban and rural population; a wide variance in land quality and production; the need for protecting domestic use and the recreational amenities and scenic qualities all combine to give water planning, development, and protection a paramount role in shaping our environment.

As the city grows, the demand for water in homes, industry, agriculture, and recreation grows. As we face the water problems in the future, we must assure that the citizens may enjoy the beauty of the country and that the quality of the environment may be protected and enhanced.

Planning for water development is a critical element in environmental protection because of the direct effect of large scale water projects on the environment. Water development relates not only to the physical, but to the social, cultural, and economic aspects of environment. It must be considered in terms of these effects, both beneficial and adverse, on the total environment.

Goals

1. It is the goal of the city to assure the land use near these areas enhances the public interest and that there is an adequate supply and quality of river and other water to meet the present and future needs of our population.

2. To obtain maximum benefit from limited water resources.

Policy

1. To develop and cause to be maintained a comprehensive area waters management program which utilizes water from rivers and streams and recognizes recreational and aesthetic considerations.

2. To base priority for utilization of water on all factors associated with both the source and the contemplated use of the water.

3. Watersheds should be protected from development, which would have adverse effects on them and reduce the effectiveness of water retention and release.

4. Multiple use of water resources such as recreational use or waterfowl habitat use should be promoted in conjunction with ground water recharge areas.

5. Water contamination should be avoided by requiring suitable lot sizes in developments not providing sewage treatment facilities.

Implementation

1. California has in the Porter-Cologne Act the most stringent water quality standards in the nation. Strict adherence to the provisions of this act will be undertaken.

2. Projects pertaining to rivers and other waters will be evaluated in relationship to the source and proposed use.

3. A water system will be managed in a manner that conserves this resource and recognizes recreational and aesthetic features.

4. Zoning classification will be adopted to regulate land uses in the river and other waterways in order to preserve the public's safety and well-being.

5. Land use maps will be updated to indicate the areas of public interest.

6. Develop an overall water use plan for the county in conjunction with the Kern County Water Agency and all water districts to establish maximum benefits from the limited water resources.

7. Establish minimum lot sizes for areas not having sewage treatment facilities. Base lot size on effluent absorption capabilities of the soil, slope of the topography, and availability of potable water supply.

6. FISHERIES

Renewed efforts are needed to reach satisfactory arrangements to provide fisheries and permit public fishing on private waters. Rural lands and waters in private ownership, chiefly in small farm holdings, offer a promising opportunity for expanding the public fishing resource base. The Bureau of Sport Fisheries and Wildlife, through its cooperative programs, is in an excellent positon to encourage such efforts.

Local fish resources are the responsibility of the individual states and historically have been managed by them. The Bureau of Sport Fisheries and Wildlife is in a favorable position to work closely with the states and other levels of local government in meeting emerging recreational problems. The city endorses the current program of land acquisition, carried out in cooperation with the states, to provide suitable habitat.

Fisheries are not found within the city, however, the sphere of interest includes such facilities.

Goal

To increase research to find new ways to provide and manage fisheries and to develop new techniques for establishing recreational fishing areas.

Policy

1. Take all possible measures to protect and improve the management of fisheries.

2. Expand pollution control efforts to improve water quality for fish.

3. Planned water projects should be made for fish to insure adequate and suitable habitat.

Implementation

The city does not, at the present time, have fisheries within its jurisdiction; however, it will support those agencies which provide fisheries and recreational sites for fisheries.

7. WILDLIFE

Some of the critical concerns of wildlife and its natural habitats is centered on rare and endangered species. Generally, a wildlife habitat is an area which has a combination of factors such as terrain, soil type, and rainfall which produce specific conditions favorable to the propagation of certain animals. When this delicate balance of nature is disturbed by man-created factors, the animals that cannot adapt to the new environment are endangered with extinction. In many cases a few continue to survive, but eventually the species exists no longer.

The California Condor and the San Joaquin Kit Fox are examples of endangered species in Kern County. There are many more animals that are in need of conservation, such as quail, chukar, rabbit, bear, deer, water fowl, and many more game animals. Kern County is among the top four counties in California in which quail and rabbits are taken by hunters. It is also a major source of chukars.

These animals are hunted by people living in the vicinity, as well as those from the surrounding metropolitan areas. The hunters of these animals contribute to the economy of this county.

Land administered by the Bureau of Land Management and the United States Forest Service provides large areas of wildlife habitat within the county. The Fish and Game Department manages programs on lands having public access. Private land is also used as hunting grounds where the hunter leases rights of access and use.

While lands inhabited by most wildlife are not located in the city, the citizens have a vested interest in the conservation of wildlife habitat.

Goals

1. To promote the survival of all existing wildlife types, both indigenous and introduced.

2. To properly utilize wildlife resources for recreational benefits.

3. To reduce loss of key wildlife habitat to uses which are detrimental to wildlife types.

Policy

1. The preservation of all species of animals is deemed essential to the citizens of the city. Public and private owners of wildlife habitat are encouraged to operate these areas in a manner that reflects good management principles and conserves the wildlife habitat.

2. Within the sphere of interest of the city, the effect of land use projects and wildlife habitat will be reviewed by the planning agency in the decision-making process.

3. Land uses known to be detrimental to wildlife habitats will be guided to other areas where such use would not be detrimental to wildlife.

4. Land use activities in important wildlife habitat areas should be restricted to that which is tolerable by the wildlife inhabitants.

5. The establishment of wildlife preserves in areas containing rare or endangered wildlife species should be encouraged.

6. Zoning classification, as necessary, to assure protection of important natural wildlife habitants and botanic communities from detrimental uses should be utilized or adopted.

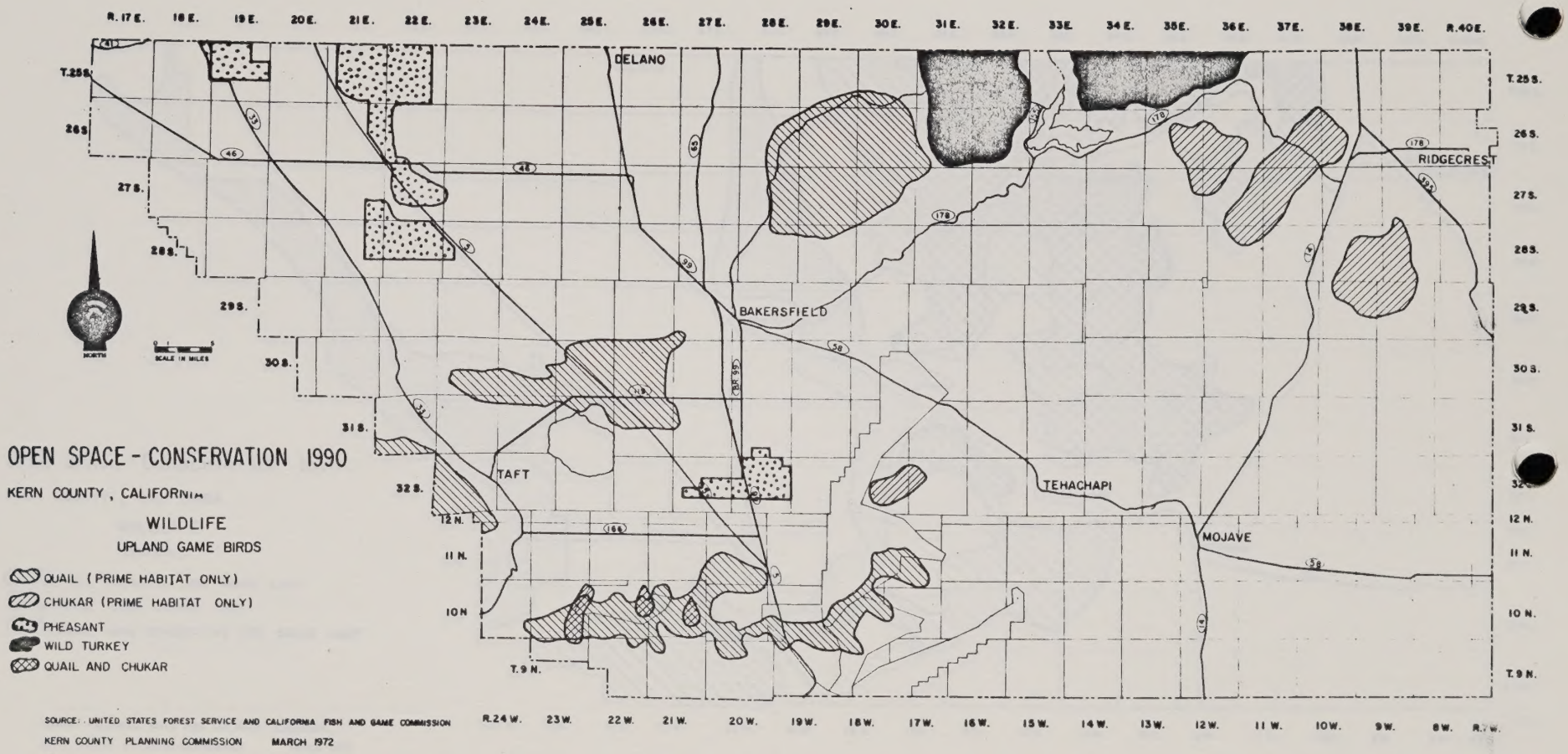
7. Sustained yield concepts of wildlife management to promote the use of wildlife resources for recreation purposes should be encouraged.

Implementation

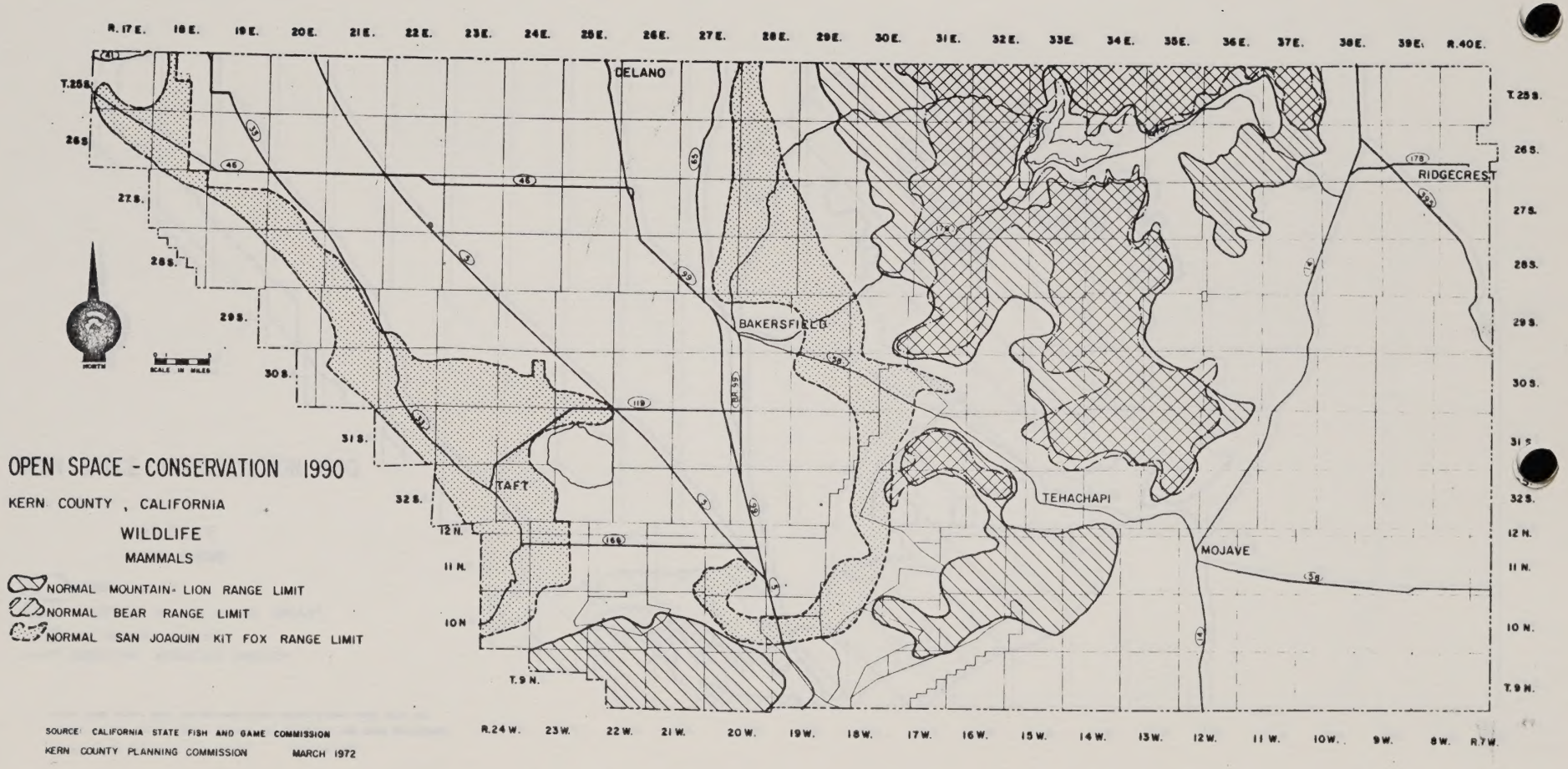
1. Establish regulations preventing off-road vehicle use in known key wildlife habitat areas, both on public and private land. The regulations could be patterned after those regulating the use of firearms in various portions of Kern County.

2. Amend established zoning where necessary to prevent use of land that may be detrimental to wildlife in important habitat areas, as shown on the adopted Open-Space and Conservation Element Plan map.

3. Initiate a study to determine the feasibility of establishing additional wildlife refuges in Kern County with state and/or federal assistance, with local fish and game associations cooperating.


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DELANO
BAKERSFIELD
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RIDGECREST
SCALE IN MILES
OPEN SPACE - CONSERVATION 1990
KERN COUNTY, CALIFORNIA
WILDLIFE
UPLAND GAME BIRDS
QUAIL (PRIME HABITAT ONLY)
CHUKAR (PRIME HABITAT ONLY)
PHEASANT
WILD TURKEY
QUAIL AND CHUKAR
SOURCE: UNITED STATES FOREST SERVICE AND CALIFORNIA FISH AND GAME COMMISSION
KERN COUNTY PLANNING COMMISSION MARCH 1972
R.24W. 23W. 22W. 21W. 20W. 19W. 18W. 17W. 16W. 15W. 14W. 13W. 12W. 11W. 10W. 9W. 8W. R.7W.





OPEN SPACE - CONSERVATION 1990

KERN COUNTY , CALIFORNIA

WILDLIFE

MAMMALS

NORMAL MOUNTAIN- LION RANGE LIMIT

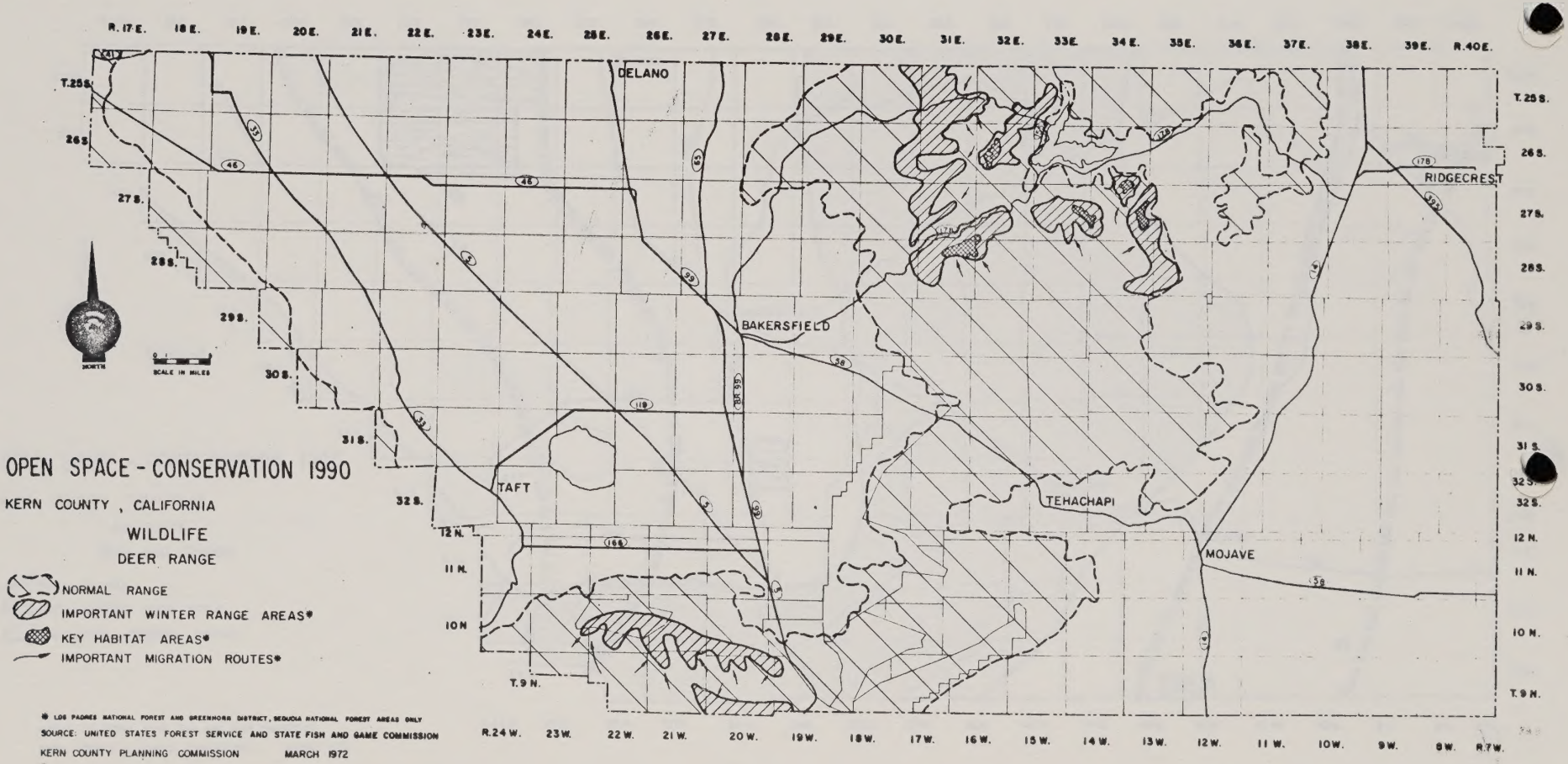
NORMAL BEAR RANGE LIMIT

NORMAL SAN JOAQUIN KIT FOX RANGE LIMIT

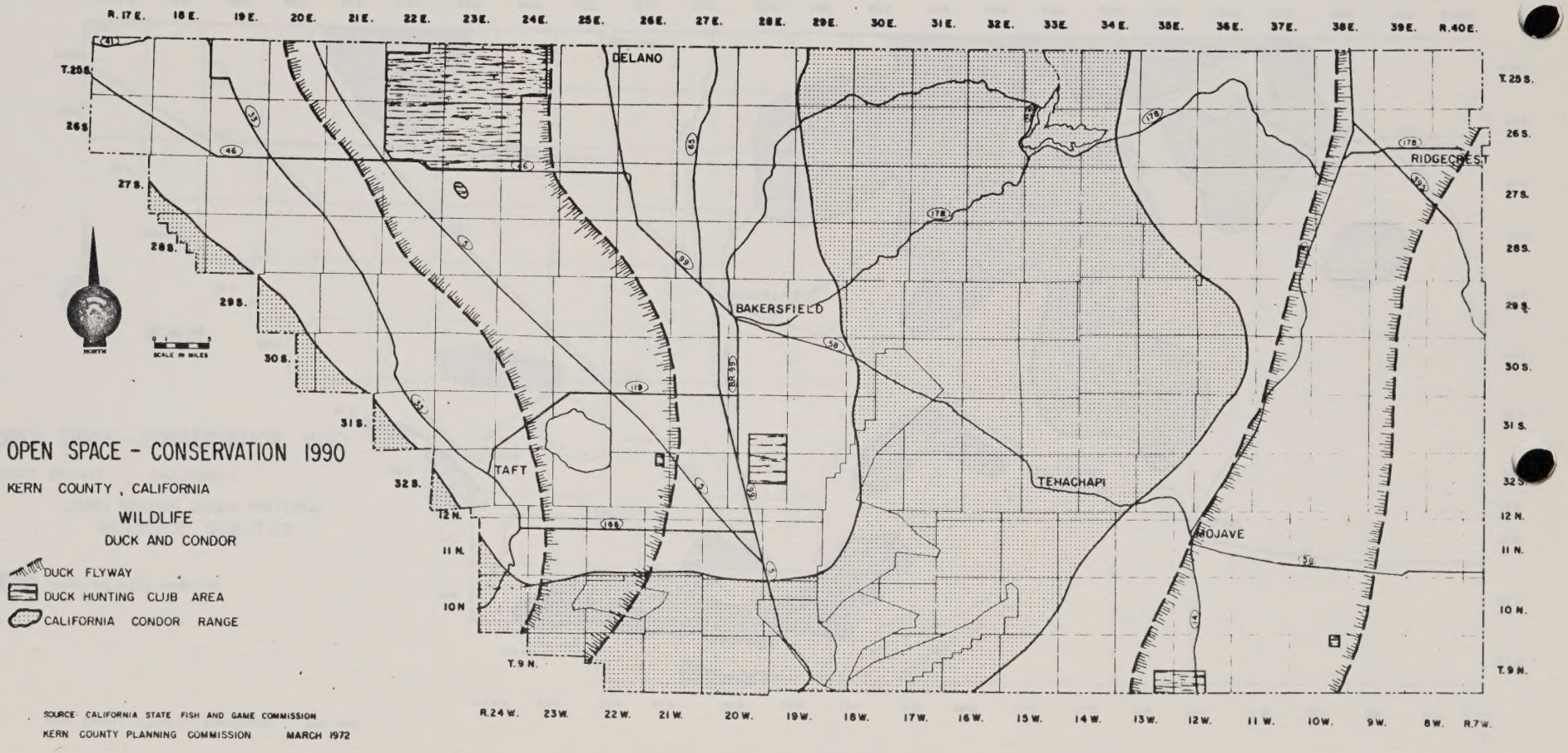
SOURCE: CALIFORNIA STATE FISH AND GAME COMMISSION

KERN COUNTY PLANNING COMMISSION MARCH 1972

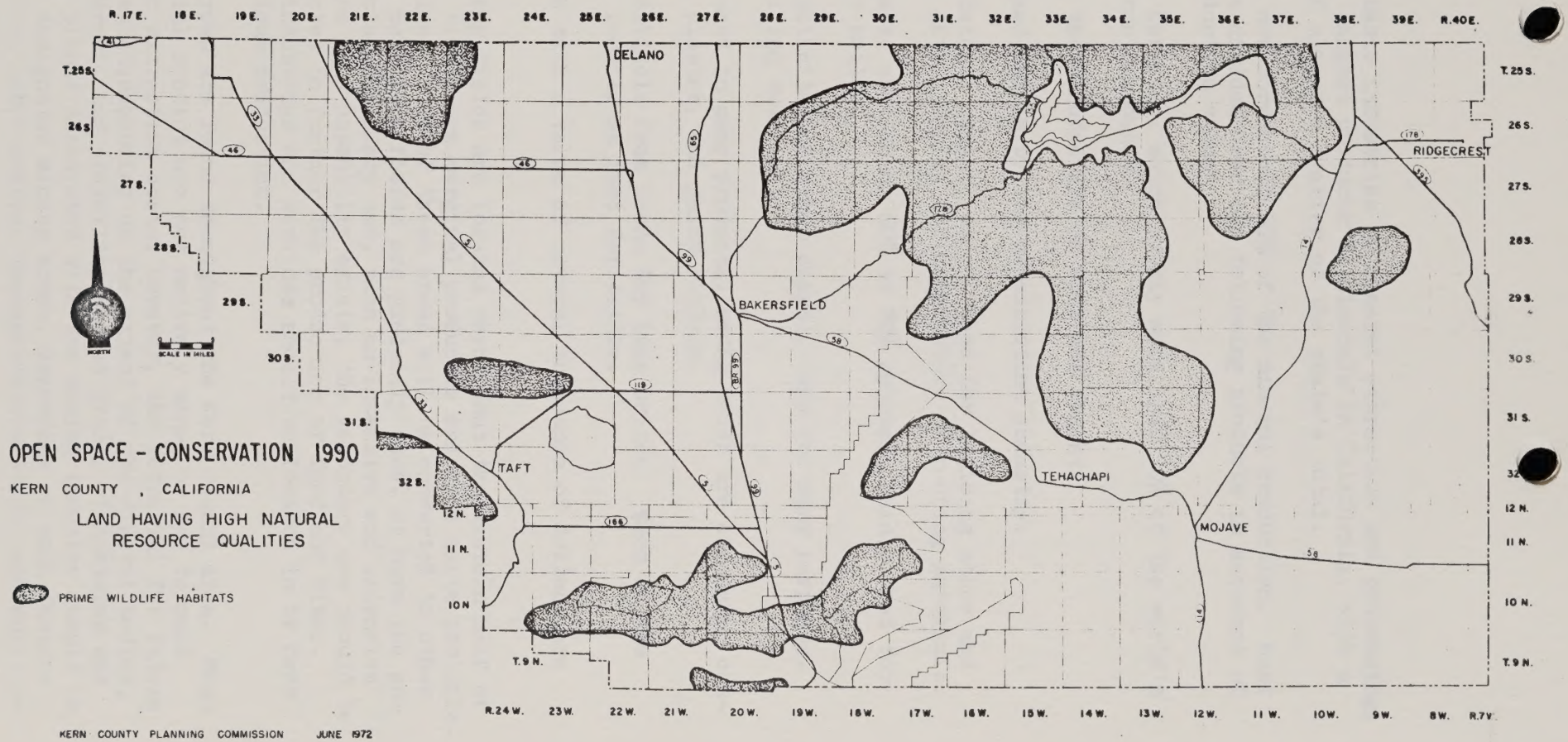



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SCALE IN MILES
OPEN SPACE - CONSERVATION 1990
KERN COUNTY , CALIFORNIA
WILDLIFE
DEER RANGE
NORMAL RANGE
IMPORTANT WINTER RANGE AREAS*
KEY HABITAT AREAS*
IMPORTANT MIGRATION ROUTES*
* LOS PADRES NATIONAL FOREST AND GREENHORN DISTRICT, SEQUOIA NATIONAL FOREST AREAS ONLY
SOURCE: UNITED STATES FOREST SERVICE AND STATE FISH AND GAME COMMISSION
KERN COUNTY PLANNING COMMISSION MARCH 1972




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MOJAVE
RIDGECREST
NORTH
SCALE IN MILES
OPEN SPACE - CONSERVATION 1990
KERN COUNTY, CALIFORNIA
WILDLIFE
DUCK AND CONDOR
DUCK FLYWAY
DUCK HUNTING CLUB AREA
CALIFORNIA CONDOR RANGE
SOURCE: CALIFORNIA STATE FISH AND GAME COMMISSION
KERN COUNTY PLANNING COMMISSION MARCH 1972




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RIDGECREST
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SCALE IN MILES
OPEN SPACE - CONSERVATION 1990
KERN COUNTY , CALIFORNIA
LAND HAVING HIGH NATURAL RESOURCE QUALITIES
PRIME WILDLIFE HABITATS
KERN COUNTY PLANNING COMMISSION JUNE 1972

51



8. MINERALS

One of the area's basic industries is mineral extraction and processing. Kern County is the largest producer of minerals in California, with a production value of almost a quarter of the state's total.

Petroleum products now form about 80% of the mineral production. Most of the remainder is divided over the following products in sequence of their relative production value:

Borates (Borax and Kernite), which supply more than 70% of the world's requirements of boron compounds.

Limestone, used in the manufacture of Portland cement.

Sand and gravel, used mainly by the construction industry.

Stone (marble, sandstone, schist, etc.), used for building stone and crushed and broken into granules for manufacture of roofing materials.

Gypsum (mostly gypsite containing 60% to 70% gypsum), mainly used for conditioning alkali soils.

Clay (bentonite, kaolinite and other clays), used for many purposes, among which is drilling mud.

Pumice, pumicite, used in many products, among which are cleansing compounds, acoustical plaster, and paint fillers.

Salt, produced at Saltdale from Loehn Dry Lake brines. Much of the production is used locally as feed for cattle.

Gold, small amounts with a value of several thousands of dollars are still produced.

Oil and gas producing fields are located throughout the western half of Kern County. Some fields are marginal producers and some quite prolific. As production declines, some of these areas will be converted to other uses. Many of the petroleum fields are presently used, or have the potential for beneficial secondary use, such as intensive and extensive agricultural. Where this capability exists, the secondary use should be promoted and protected to further the production of food and fiber. Petroleum related industries and services should be located in or near the areas of petroleum production.

Minerals of many types are found throughout the Kern County area. Most areas of high mineral content are not actively mined or are dormant because of the high extraction costs; however, the potential for future mining activities exist, depending on the extent of the mineral bodies, quality of the material, and prevailing market price. Industries and mineral processing plants associated with the mining industry should be located within the designated mining areas, depending on such factors as water availability, labor source, transportation costs, and environmental considerations.

Goal

To judiciously utilize the natural resources for the benefit of the people of the area and the nation without detriment to the environment and to insure efficient use of the natural resources.

To efficiently utilize all available minerals and mineral resources found in this area without unnecessary damage to the environment.

Policy

1. The esthetic nature of the landscape is to be preserved. Mining and mineral processing operations should not be detrimental to the use capability of surrounding properties because of noise, odor, dust, vibration, or related hazards and inconveniences.

2. Mineral processing operations and petroleum refineries should be located close to the material source.

3. Mineral and oil waste products should be disposed of in a manner having the least possible detrimental effect upon scenic vistas and the environment.

4. Large scale displacement of earth should be avoided whenever alternate economic methods of extraction are available.

5. Mining and petroleum extraction shall not have an adverse effect upon water sources and watersheds.

6. Consideration shall be given to protect wildlife and livestock from the dangers of mining and petroleum product extraction.

7. Identified mineral lands should be regulated to uses which will not restrict or deter potential mineral production.

8. Potential use of existing oil fields to allow for appropriate conversion of uses after oil production activities cease should be evaluated.

9. Mandatory regulatory measures to protect the environment and surrounding land uses from possible pollution by noise, dust, smoke, and water contamination should be instituted.

10. Where feasible, rehabilitation of the natural landscape after mineral production and extraction has ceased should be required.

Implementation

1. Establish a zone classification which will create a mineral area reserve, allowing only uses which will not seriously restrict future production. The new zone classification should be established on identified mineral resource land.

2. Amend the Zoning Ordinance to require Board of Zoning Adjustment approval for all proposed mining and milling operations involving inorganic mineral products.

3. Initiate studies to determine what controls and rehabilitation measures may be effective and feasible to protect environmental qualities from mining and mineral production activities.

4. Designate mineral rich areas on the land use maps of the General Plan.

Minerals

The southern tip of the Fruitvale Oilfield lies within the boundary of Bakersfield. It is located between Stockdale Highway and Kern River in the vicinity of California Avenue extension. Presently there are fifty-two low producing wells operated by three companies on Tenneco leased land. Development of this portion of the field began in 1950. For assessment purposes, the County Assessor placed a life expectancy of six years on these wells in 1971-72 tax year.

The drilling derricks were all removed. The only structures visible are the pumping apparatus. As operated presently, the oil is pumped above ground and piped to holding tanks to await final disposition.

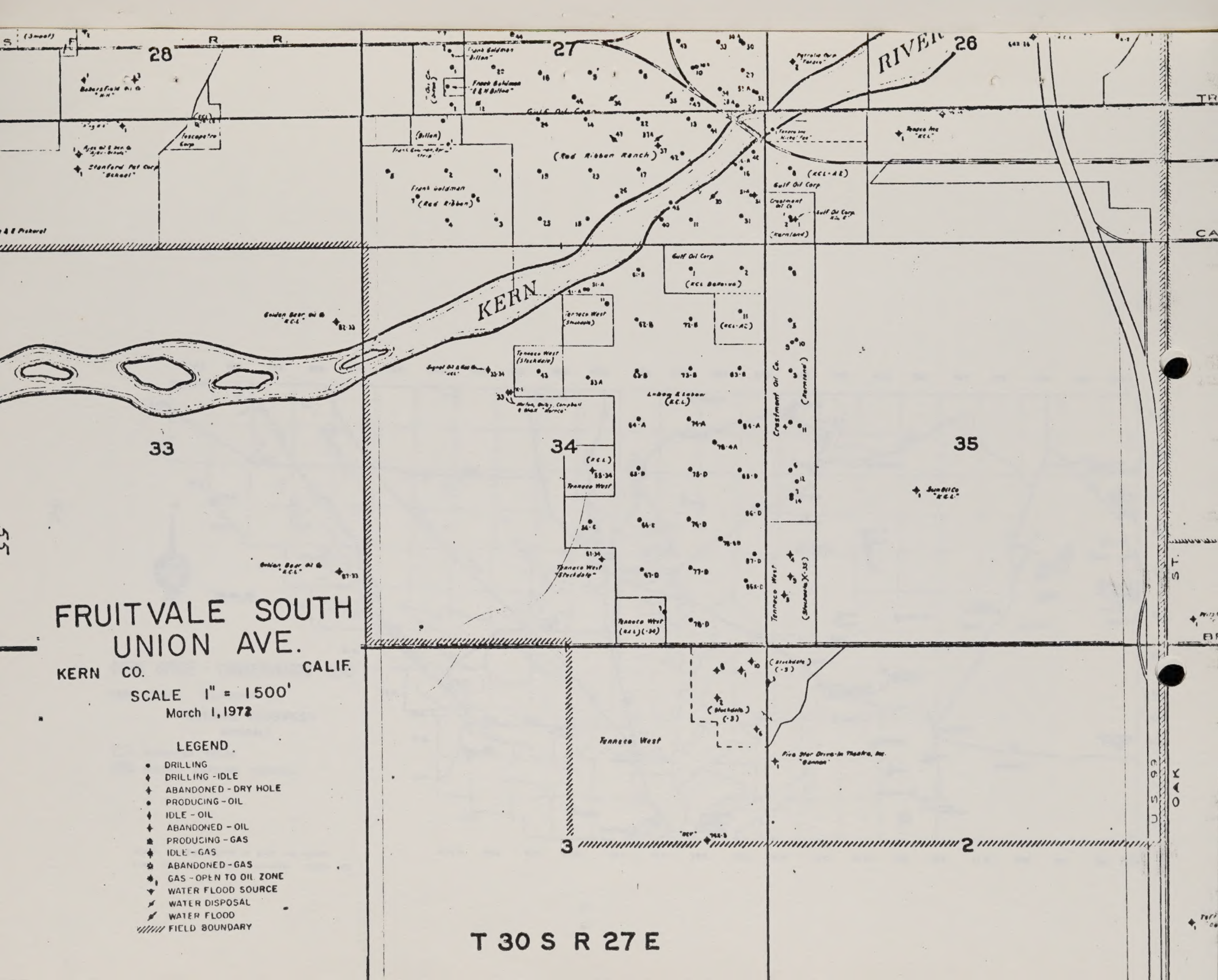
The area is in the path of urban development. Should development occur during the producing life of these wells the sites should be fenced and screened with rapid growth trees and shrubs to minimize the adverse effect on urban uses, and additional landscaping about the sites would produce a series of mini-parks, thus creating some much welcomed green areas.

At present, no other minerals are being mined in the City. Sand and gravel may be mined with a Conditional Use Permit.

Oil, gas, and other hydrocarbon substances are permitted in the "W" Zone, or "W" Overlay in the Agriculture and General Manufacturing Zones with certain conditions.

Conservation of Other Resources

Other elements of conservation such as forests, rivers and their waters, fisheries, wildlife, are not found within the City boundaries, but because the conservation of these elements are important to the happiness and enjoyment of the people, including the residents of Bakersfield, the City would give whole hearted support for the conservation of such areas to entities having jurisdiction.



FRUITVALE SOUTH
UNION AVE.

KERN CO. CALIF.

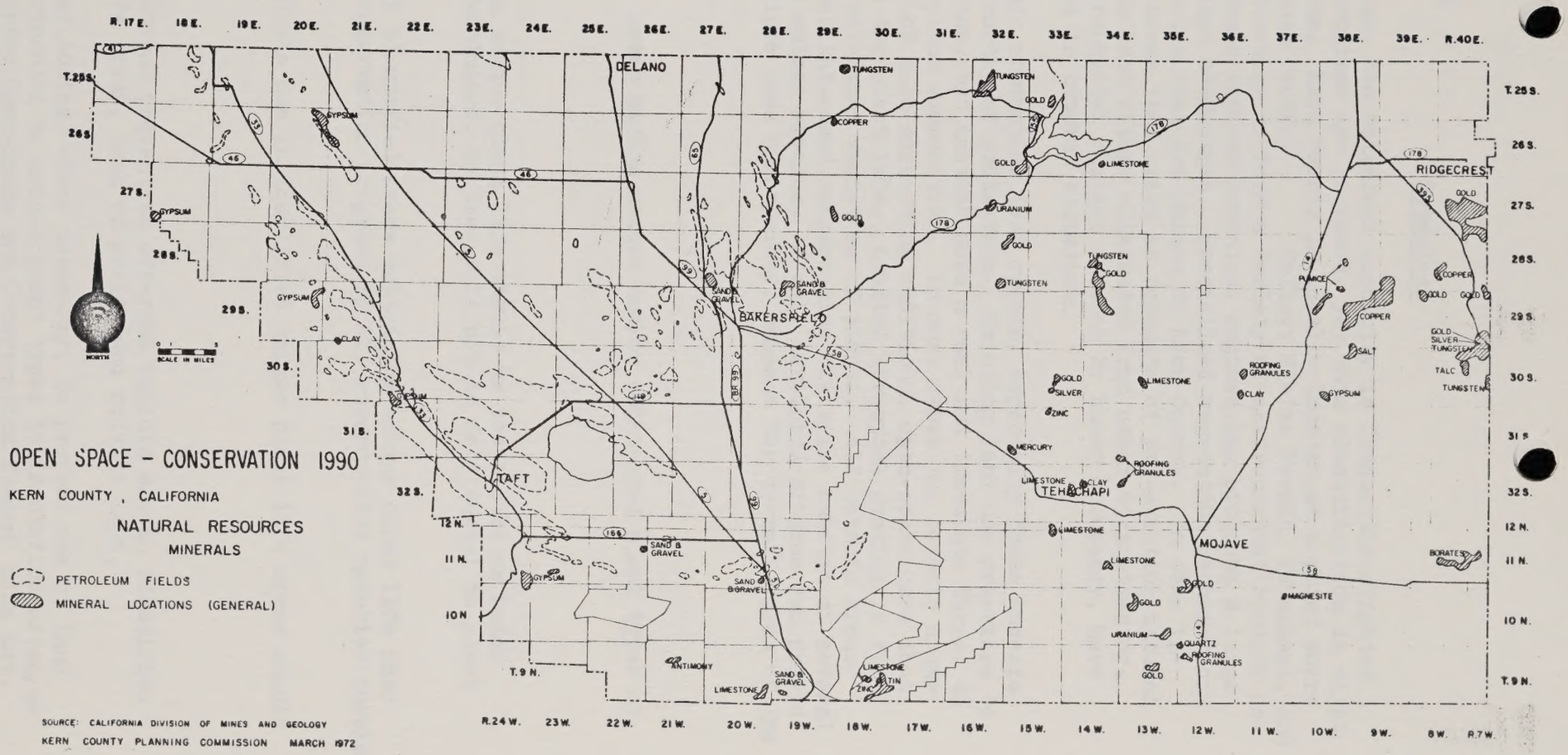
SCALE 1" = 1500'

March 1, 1972

LEGEND

- DRILLING
- DRILLING - IDLE
- ABANDONED - DRY HOLE
- PRODUCING - OIL
- IDLE - OIL
- ABANDONED - OIL
- PRODUCING - GAS
- IDLE - GAS
- ABANDONED - GAS
- GAS - OPEN TO OIL ZONE
- WATER FLOOD SOURCE
- WATER DISPOSAL
- WATER FLOOD
- FIELD BOUNDARY





OPEN SPACE - CONSERVATION 1990

KERN COUNTY, CALIFORNIA

NATURAL RESOURCES

MINERALS

PETROLEUM FIELDS

MINERAL LOCATIONS (GENERAL)

SOURCE: CALIFORNIA DIVISION OF MINES AND GEOLOGY
KERN COUNTY PLANNING COMMISSION MARCH 1972

9. OTHER RESOURCES

Botanical

As a natural resource, the botanical community is frequently slighted when conservation programs are proposed, yet this classification is vital to a balanced program. Kern County is ideally located at a point where high desert; low Great Central Valley; Sierra Nevada, Tehachapi, and Timblor mountains converge to form a variety of environmental conditions. The confluence of these various botanical regimes has produced a large array of natural plant communties. Specialized vegetation associations include botanic species that are unique to Kern County. In some instances, there are areas that exist as remnants of pre-existing natural vegetation which has been either eliminated from other vicinities or, in response to environmental changes created by human occupancy, have been greatly altered in organic structure.

Those natural botanic communties that remain, especially those endemic to Kern County are worthy of protection. Existing land use practices do not provide protection, but instead pose a real and immediate threat to some of the unique plant communities. In most cases the botanic areas have the capability of also supporting additional open-space uses that are compatible with the plant life. Limited livestock grazing is frequently compatible with many varieties of plants. All botanic areas serve as wildlife habitat--some encompassing the prime habitat of several rare and endangered animal species. A well developed program can provide protection for multiple uses and, thereby, enhance the overall value of the project.

Goals

To preserve natural areas having unique and/or endangered plant types or plant communities.

Policy

1. Areas containing unique plant life should be restricted or human use activities minimized, so uses will not be detrimental to plant types.

2. The inclusion of identified areas containing unique plant life into specific land conservation programs by all governmental agencies should be provided.

3. The off-road vehicle use in identified unique plant life areas should be controlled.

Implementation

1. Establish regulations preventing off-road vehicle use in identified unique plant life areas, both on public and private land.

2. Amend established zoning, where necessary, to prevent use of land that may be detrimental to unique plant types in identified areas, as shown on the adopted Open-Space and Conservation Element plan map.

NATURAL BOTANIC COMMUNITIES

(Refer to map for locations)

Site No. 1 Area includes two rare and endangered endemic, botanical species:
-- Harvest Brodiaea (*Brodiaea coronaria* var *Kernenses*)
-- White Tidy Tip (*Layia leucopappa*)

Site No. 2 Area contains a representative desert vegetation association, one of which is a rare and endangered endemic species:
-- Spreading Loeflingia (*Loeflingia pusilla*)

Site No. 3 Principal habitat for the rare and endemic Bakersfield cactus:
-- *Opuntia Treleasei*

Site No. 4 Area contains the rare and endemic species:
-- Kern Poppy (*Eschscholzia caespitosa* var *Kernensis*)
-- Other species: Baby Blue Eyes, Blue Fiddleneck, Owls' Clover and Blazing Star

Site No. 5 Habitat of the rare species:
-- Piute Jewel Flower (*Steptanthus cordatus* var *Piutensis*)

Site No. 6 Area of the very rare and local:
-- Tejon yarrow (*Eriophyllum lanatum* var *Hallii*)

Site No. 7 Distinctive plant types include:
-- San Emigdio alum root (*Heuchera caespitosa*)
-- Big Cone spruce, Jeffery pine, Bush lupine, and Maricopa lily

Site No. 8 Colony of very rare, endemic:
-- Alpine phacelia (*Phacelia humilus* var *Dudleyi*)
-- Manzanita, White fir and Longleaf willow

Site No. 9 Scrub association contains two uncommon endemic plant species:
-- Kern Camissonia (*Camissonia Kernensis*)
-- Charlottes phacelia (*Phacelia Nashiana*)

Site No. 10 Notable Kern endemic species:
-- Piute Cypress (*Cupressus nevadensis*)

Site No. 11 A rare and unique endemic species:
-- Kern Navarretia (*Navarretia setiloba*)

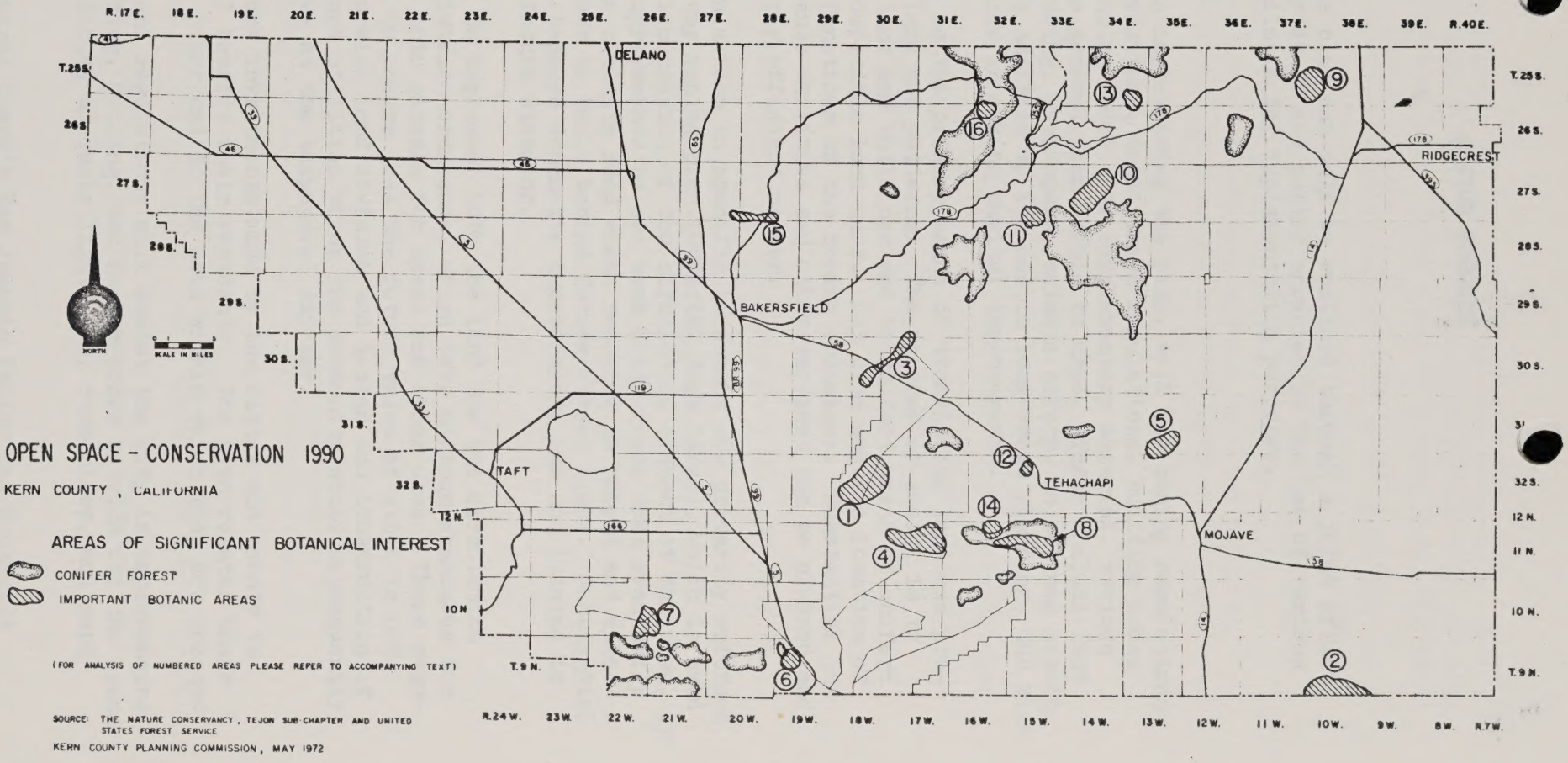
Site No. 12 A rare and recently discovered:
-- Tehachapi Slender Salamander

Site No. 13 Scarce endemic:
-- Onyx bedstraw (*Galium angustifolium* var *Onycense*)

Site No. 14 Very specialized vegetative association:
-- Shin-Oak Chaparral

Site No. 15 Only remaining natural marsh in southern San Joaquin Valley.

Site No. 16 Extremely rare and endemic botanic species:
-- Western Mariposa (*Calochortus coerulea* var *Westonii*)


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DELANO
BAKERSFIELD
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NORTH
SCALE IN MILES
OPEN SPACE - CONSERVATION 1990
KERN COUNTY, CALIFORNIA
AREAS OF SIGNIFICANT BOTANICAL INTEREST
CONIFER FOREST
IMPORTANT BOTANIC AREAS
(FOR ANALYSIS OF NUMBERED AREAS PLEASE REFER TO ACCOMPANYING TEXT)
SOURCE: THE NATURE CONSERVANCY, TEJON SUB-CHAPTER AND UNITED STATES FOREST SERVICE
KERN COUNTY PLANNING COMMISSION, MAY 1972



ACTION PROGRAM

Plan Implementation

The objectives of the plan can only be realized through a joint effort between private individuals and public agencies in the use of various government tools available for implementation purposes.

The Role of the City

Local governments, in implementing the plan, will use zoning regulations, building setback regulations, subdivision regulations, building codes health codes, and housing codes. As supplementary material, various other elements of the general plan should be used. These include land use, circulation, housing, open-space, seismic safety, noise, and scenic highway elements. In addition to its use in long-range planning, the plan will be used as a guide in making capital improvements.

The zoning ordinance is the primary means of translating land use proposals into precise land use patterns. The purpose of zoning is to regulate the use of land and buildings and to protect areas of uniform development from incompatible land uses. Lot size and the location of structures are also functions of the zoning ordinance. Substantial tax monies are saved because utilities and other services can be planned and developed in an orderly, efficient manner.

Building setback regulations in specific locations are primarily enforced by means of the highway zoning plan (Official Plan Lines), which is used to assist in the implementation of the circulation element of the plan, by requiring that new improvements be set back along roads that eventually will be widened. The ultimate road width required is mapped and subsequent improvements must be built behind future street lines. Substantial tax monies are saved because expensive improvements are not located in areas scheduled for future widening.

A tool which is used to implement both the land use and circulation elements is the subdivision ordinance, which sets minimum standards for the division of land into parcels for homes and other uses. These regulations are designed to insure that the future value of sites is not lessened because of unwise land division and design and construction of substandard streets and utilities which the community would subsequently be required to improve at the taxpayers' expense.

Public improvements are investments made by the cities and county in facilities which will benefit their residents. The plan relates these improvements to each other and to the area within which they are located.

The following codes and regulations will assist the city in implementing this plan: The building, housing, and health codes provide for the sound construction of buildings, adequate light, air, room sizes, and sanitary facilities.

The Air Pollution Control Board's San Joaquin Valley and Southeast Desert Implementation Plans have been developed to assure that the high quality of the air will be maintained. These plans include detailed implementation procedures and standards which should be utilized by all jurisdictions.

The Areawide Housing Element and the individual housing elements of the incorporated cities form a firm basis for provision of a variety of housing types for all residents of the area. These plans have just been completed.

The development of a community is never complete; it is a continuing process. If the plans are to be useful and effective, they must be continually maintained and kept up to date. The proposals of the plan, therefore, should not be interpreted as unchangeable, but rather as indicating future proposals which were developed at a given point in time. As new factors evolve and conditions unfold, the plan is to be reviewed and updated. This updating should be undertaken at least every three to five years.

Procedure

A community's commitment to the planning process is measured by its willingness to enact the legislation which will give legal effect to its plans. The foregoing sections of the plan deal with the roles and responsibilities of local and other agencies. In this section recommended action is presented that must be taken to fulfill those responsibilities. It presents firm actions that are to be accomplished by the city agencies responsible for the city program and methods that will be used to accomplish their goals.

Action by City Departments

The conservation, development, and utilization program will continue to be developed in accordance with the priorities as follows:

1. Develop, or cause to be developed, zoning ordinances which include provisions for land conservation.

    a. Conservation zones.

    b. Seismic safety zones.

    c. Flood plane zones.

    d. Open space zones.

    e. Scenic highway.

2. Acquire real property that is necessary for the preservation of natural, scenic highway, or historic values and that will become unavailable if not acquired.

3. Acquisition of real property and development of facilities for recreation, provision of flood control, water supply, and waste disposal.

4. Acquire, protect, and preserve examples of natural and scenic landscape and significant evidence of history.

In order to accomplish this action program, the city will utilize limited general funds, donations of land, state and federal grants, and loans.

The city will continue to file applications for matching state and federal grant programs.

The city will continue to meet its responsibilities directly by administrating the local plans and development.

APPENDIX A

EDUCATION FOR NATURAL RESOURCE CONSERVATION

Education in and for the conservation of natural resources should be an integral part of the elementary and high school curriculum. This will require an increasing emphasis on education for recreation and conservation.

In the past, appreciation of the role our natural resources played in our country's development has been neglected in most school programs. It has been widely assumed that the home and community agencies would provide the opportunities for individuals to acquire knowledge of conservation principles and an appreciation of our natural resources. But with the shift and increase of population and the changing patterns of work and leisure, it has now become apparent that children need to be taught the importance of conserving our natural resources in order to prevent waste and destruction of these elements.

The school's responsibility in the field of conservation should be to:

1. Provide an awareness of man's place within the total natural environment.

2. Teach the wise use and conservation of natural resources, such as forests, wildlife, fisheries, minerals, soils, water.

3. Teach skills, knowledge, and attitudes for maximum satisfaction in outdoor pursuits and conservation of our natural resources.

4. Support a sound program for acquisition, conservation, utilization, and development of a natural resources program.

This responsibility should not end with the education of children, but should include adult education as well.

The teaching of conservation will have great effect on the outdoor resources of the nation. It will provide for resource care and protection, as well as to increase their use, because a sizable portion of the population will have a background for developing continued interest in our resources. This kind of education will be the best guarantee that people will know how to use these resources properly and to protect them for future generations.

APPENDIX B

PRESERVATION OF OPEN SPACE

METHODS OF PRESERVATION

Outlined below are some of the various methods of preserving open space and conservation areas, listed in approximate order of effectiveness and permanency.

1. Acquisition in Fee

Full fee interest in land for open space and conservation may be acquired by purchase, through gifts, or by the process of eminent domain.

a. Purchase and use by a public jurisdiction.

b. Purchase--leaseback. Land is purchased by a public jurisdiction and leased back to the original owner or another party for uses compatible to open space objectives under conditions that may be stipulated by the public body. Variations could allow, where appropriate, leases for specific lengths of time or in life estate to the original owner.

c. Purchase--saleback. Land is purchased by a public jurisdiction and resold to either the original owner or a third party with certain covenants or less certain rights, such as development rights.

2. Acquisition of Partial Interest

Interests that are less than the fee simple in land include easements, leases, rights-of-entry, covenants running with the land, and other "development right," a term commonly used to indicate a broad range of less-than-fee interests. The purposes of the acquisition of development rights rather than of the entire fee interest are to (1) lower the costs of acquisition, (2) keep the land on the tax rolls, (3) permit land to remain in productive use, and (4) retain efficiency of private management.

a. Development rights. The rights to develop the land to intensive uses are acquired by a public jurisdiction. The land and its use for other purposes remain in private ownership.

b. Scenic or conservation easements. The right to control land to a degree over and above what may be allowable through police powers is acquired by a public jurisdiction.

3. Legislative Policy and Practice

The method of tax inducement utilized in California is the Land Conservation Act (Williamson Act) of 1965, as amended. The use of tax inducements to date can best be looked upon as a temporary holding action for open space, subsidized by urban taxpayers with no promise of permanent open space for future use.

4. Regulatory Methods

The cities under their police powers can control the use that people make of their property. However, the Constitution prohibits governing bodies from depriving people of their property without due process of law. The dividing line between regulation and taking is imprecise. Regulatory schemes thus suffer the risk of being declared void as an unconstitutional taking of property. The regulatory schemes, be they zoning or taxation, also suffer from the fact that the restrictions are legislative and not incorporated into the legal title of the land. Thus they have little permanence and can be altered or abandoned at the discretion of the Legislature.

a. Zoning. The basic "use" and "density" designation, plus "scenic conservation" and "special regulation"--combining districts where appropriate.

b. Other statutes and ordinances concerned or related to conservation: health regulation, grading ordinances, pollution control laws, etc.

COST OF CONSERVATION

The high cost of acquiring land is usually considered one of the biggest barriers to preserving lands. While methods cheaper than full purchase of open space are available, some of them, such as the purchase of development rights and easements, can also be costly. These methods, and those of zoning and the granting of tax benefits to preserve open space, typically give the governing agency less control over development. Only full acquisition can assure that 30 years in the future open space will remain completely open.

Recent studies have suggested that in some cases the cost of retaining land as open space may be less than the cost of development. Savings in utility and service costs may offset the cost of open space acquisition.

METHODS OF FINANCING

Since both acquisition in fee and purchase of development rights and easements are likely to be quite costly, methods of financing, where acquisition is sought, can be explored on a wider range than the property tax itself. It might be possible to use some revenue sharing for needed capital improvement. The City might derive revenue from purchased property by leasing. Developers or subdividers might be required to dedicate land for park purposes or pay fees to be devoted to park purchase. Taxes other than the property tax could be a minor source of funds for fee or less-than-fee acquisitions. Gifts of land from private persons will not be overlooked as a source of such funds. Federal and State grants providing matching funds may be applied for when deemed necessary or proper by the City Council.

APPENDIX C

WORK PROGRAM ITEMS

ELEMENTS OF THE GENERAL PLAN

Prepare a Seismic Element after securing the necessary information from qualified consultants.

Prepare a Scenic Highway Element.

Prepare a Noise Element.

STUDIES AND REPORTS

Continue the study of methods of preserving areas with conservation assets and prepare reports of findings.

Continue to analyze means of replenishing underground water supplies and to study reuse of waste water.

Continue to review guidelines and procedures for the preparation and review of environmental impact statements.

Encourage a study of the potential economic value of recreation to the county.

PROVIDING INFORMATION TO THE PUBLIC

Provide information on the advantages to the public of keeping urban development contiguous to existing urban centers to avoid conflict with agricultural uses.

COORDINATION OF PUBLIC AGENCIES

Cooperate in the development of local open space and conservation to assure compatibility of all open space plans within the metropolitan area.

CERTIFICATION OF ADOPTION
BY THE
PLANNING COMMISSION

We hereby certify that this document, text, accompanying tables and maps constitute a Conservation Element of the City of Bakersfield, as required by Section 65302, paragraph (d) of the Government Code, State of California. This "Conservation Element" being proposed as a part of the adopted General Plan for the City of Bakersfield was approved and adopted by Resolution No. 5-73 of the Bakersfield Planning Commission, at its regular meeting of 6th day of June, 1973, after conducting a public hearing pursuant to Section 65351 of the Government Code, State of California.

Dewey Sceales

DEWEY SCEALES, Planning Director
Secretary, Bakersfield City Planning
Commission

CERTIFICATION OF ADOPTION
BY THE
CITY COUNCIL

I hereby certify that this document, text, accompanying tables, and maps constitute a "Conservation Element" of the City of Bakersfield, as required by Section 65302, paragraph (d) of the Government Code, State of California. This "Conservation Element" proposed as a part of the General Plan and having been reviewed by the Planning Commission and said commission having made its recommendation to this council, was adopted by Resolution No. 47-73 of the Bakersfield City Council at its regular meeting of 18th day of June, 1973, after conducting a public hearing pursuant to Section 65351 of the Government Code, State of California.

CITY CLERK and Ex Officio Clerk of the
Council of the City of Bakersfield

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